

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

BUSINESS PROCESS REFORM AT MARINE CORPS INSTALLATIONS: A SYSTEMS PERSPECTIVE

by

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December 2000

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DTIC QUALITY INSPECTED 4

20010215 031

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE December 2000		3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE : Business Process Reform At Marine Corps Installations: A Systems Perspective			5. FUNDING NUMBERS	
6. AUTHOR(S) Grandrath, William E.				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) The Department of Defense (DoD) has made a conscious decision to find ways to reduce infrastructure costs, and apply the savings to weapons system modernization. Thus the "Defense Reform Initiative" (DRI) and the "Revolution in Business Affairs" (RBA) were created to help achieve needed savings. The Marine Corps, along with the other services, is in the process of changing the way installations are operated because of these initiatives. Better business practices are expected to include efficiency and effectiveness gains through competitive sourcing of goods and services, outsourcing and privatizing functions that are currently done in-house, as well as consolidating like functions within regional (geographical) areas and reengineering business processes. This study examines the impact that DoD reform initiatives are having on Marine Corps installations using an organizational systems framework model. Findings indicate that the reform initiatives are being implemented. The reforms are impacting the operation of Marine Corps installations. Marine Corps actions for some of the organizational system elements are incongruent with stated intent. Specific recommendations include: set clear direction by articulating a vision of installation expectations; revise the current installation structure, influence a culture change by revising and clarifying strategic direction; and monitor desired results.				
14. SUBJECT TERMS Business Reform, Outsourcing, Regionalization, Privatization, Competitive Sourcing, A-76, Reengineering, Organization, and System			15. NUMBER OF PAGES 209	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified		20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18

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**BUSINESS PROCESS REFORM AT MARINE CORPS INSTALLATIONS: A
SYSTEMS PERSPECTIVE**

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B.S., University of California at Davis, 1983

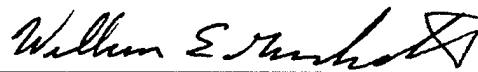
Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

**NAVAL POSTGRADUATE SCHOOL
December 2000**

Author:

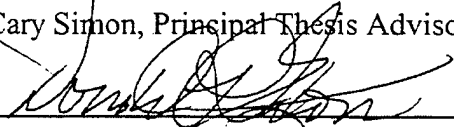


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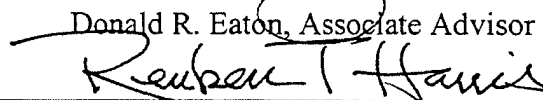
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ABSTRACT

The Department of Defense (DoD) has made a conscious decision to find ways to reduce infrastructure costs, and apply the savings to weapons system modernization. Thus the "Defense Reform Initiative" (DRI) and the "Revolution in Business Affairs" (RBA) were created to help achieve needed savings. The Marine Corps, along with the other services, is in the process of changing the way installations are operated because of these initiatives. Better business practices are expected to include efficiency and effectiveness gains through competitive sourcing of goods and services, outsourcing and privatizing functions that are currently done in-house, as well as consolidating like functions within regional (geographical) areas and reengineering business processes.

This study examines the impact that DoD reform initiatives are having on Marine Corps installations using an organizational systems framework model. Findings indicate that the reform initiatives are being implemented. The reforms are impacting the operation of Marine Corps installations. Marine Corps actions for some of the organizational system elements are incongruent with stated intent. Specific recommendations include setting a clear direction by articulating a vision of installation expectations, revising the current installation structure, evolving a cultural change by revising system direction setting to reinforce DoD mandates, and realigning expected results with the direction set.

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LIST OF ACRONYMS

A-76	OMB Circular No. A-76, Performance of Commercial Activities
ABC	Activity Based Costing
ACMC	Assistant Commandant of the Marine Corps
ACOS	Assistant Chief of Staff
A/E	Architect and Engineering
BAH	Basic Allowance for Housing
BEA	Budget Enforcement Act
BENS	Business Executives For National Security
BOS	Base Operating Support
BQ	Bachelor Quarters
BRAC	Base Closure and Realignment
BUR	Bottom Up Review
CA	Commercial Activity
CBO	Congressional Budget Office
CBE	Center For Business Excellence
CG	Commanding General
CINC	Commander in Chief
CMC	Commandant of the Marine Corps
CNA	Center for Naval Analysis

CNO	Chief of Naval Operations
CONUS	Continental United States
CORM	Commission on Roles and Missions
CORRS	Commanding Officer's Readiness Reporting System
COS	Chief of Staff
DBOF	Defense Business Operations Fund
DC I&L	Deputy Commandant for Installations and Logistics
DeCA	Defense Commissary Agency
DESC	Defense Energy Support Center
DFAS	Defense Finance and Accounting Service
DISA	Defense Information Systems Agency
DITY	Do It Yourself
DLA	Defense logistics agency
DoD	Department of Defense
DON	Department of Navy
DRI	Defense Reform Initiative
DTIC	Defense Technology Information Center
DVD	Direct Vendor Delivery
EC	Electronic Commerce
EFT	Electronic Funds Transfer

ESC	Executive Steering Committee
FMF	Fleet Marine Force
FTE	Full Time Equivalent
FYDP	Future Years Defense Program
GAO	General Accounting Office
GDP	Gross Domestic Product
GME	Garrison Mobile Equipment
GPRA	Government Performance and Results Act
HHG	Household Goods
HQMC	Headquarters Marine Corps
ICP	Installations Campaign Plan
IFM	Integrated Facility Management
IHG	Inherently Governmental
IR	Installation Reform
IT	Information Technology
JCS	Joint Chiefs of Staff
KSA	Knowledge, Skills, and Abilities
LAN	Local Area Network
MAGTF	Marine Air Ground Task Force
MARFORRES	Marine Corps Forces Reserves

MEF	Marine Expeditionary Force
MEO	Most Efficient Organization
MILCON	Military Construction
MOS	Military Occupational Specialty
MRC	Major Regional Conflict
MWR	Morale, Welfare and Recreation
NAF	Non-Appropriated Fund
NAVFAC	Naval Facilities Engineering Command
NDP	National Defense Panel
NPR	National Performance Review
NSB	Naval Studies Board
OMB	Office of Management and Budget
O&MMC	Operations and Maintenance Marine Corps
OSD	Office of the Secretary of Defense
PAYGO	Pay As You Go
PMB	Position Management Board
PPBS	Planning, Programming, and Budgeting System
PPV	Public Private Venture
PresBud	President's Budget
QDR	Quadrennial Defense Review

QOL	Quality of Life
RBA	Revolution in Business Affairs
RDT&E	Research, Development, Test & Evaluation
RFI	Request for Interest
RFP	Request for Proposal
RMA	Revolution in Military Affairs
RPM	Real Property Maintenance
SecDef	Secretary of Defense
SecNav	Secretary of the Navy
SPS	Standard Procurement System
USDA&T	Under Secretary of Defense for Acquisition and Technology
USMC	United States Marine Corps

ACKNOWLEDGMENT

First and foremost I would like to thank those individuals at the Marine Corps installations that provided their support throughout the information-gathering phase of this thesis. Many of them found time to help me even when their schedule did not allow for the interruption. Without their help and assistance, this effort would not have been possible. I also want to make it clear that the findings of this thesis are not focused on the faults of installation managers, but rather on the system that they work within.

I would also like to acknowledge Colonel Dave John who provided much of the incentive that led me to pursue this topic and to Mr. Steve Vines who served as a sounding board for many of my ideas. I owe a debt of gratitude to Professor Cary Simon and RADM Don Eaton for their efforts in helping me develop this thesis. Last, but not least, I am forever grateful for the support I received from my dear wife Dianna.

I. INTRODUCTION

A. BACKGROUND

Behind the “tip of the spear” of the United States Marine Corps’ Fleet Marine Force (FMF) warriors lies their supporting establishment, the fifth element of the Marine Air Ground Task Force (MAGTF). By far the most substantial components of the Marine Corps supporting establishment are the shore installations, and the uniform Marines and civilians that operate them. Installations are an integral part of the MAGTF foundation. They enable the creation, sustainment, and deployment of Marines. Additionally, readiness of the operating forces, whether forward deployed or in garrison, depends on healthy and robust installations. Installations serve as the launch platforms; land, airspace, and water access make up training ranges while maneuver areas, and buildings provide the classrooms where Marines learn and maintain their critical battle skills. *“Without installations, there is no readiness.”* (Installation Campaign Plan, 2000).

The Marine Corps installations provide everything from live-fire “shoot and maneuver” training support to family homes, and everything in-between. Specific missions assigned to the different installations vary however all have many common support requirements. Common support includes: providing a home base for the Marine units and their equipment, providing meaningful training opportunities and support,

facilities to store and maintain unit equipment, and a place to live with community support for active duty members and their families

The Department of Defense (DoD) has made a conscious decision to find ways to reduce infrastructure costs, and apply the savings to weapons system modernization. (Cohen, 1997). Thus the "Defense Reform Initiative" (DRI) and the "Revolution in Business Affairs" (RBA) were created to help achieve needed savings. The Marine Corps, along with the other services, is in the process of changing the way installations are operated. The stated intent is to reduce costs and improve services thereby becoming more efficient and effective. The savings generated will be used to buy-down the deficiency in warfighting equipment modernization. Better business practices are expected to emerge as the tools of the "revolution" are applied. These tools include efficiency (effectiveness added later) gains through competitive sourcing of goods and services, outsourcing and privatizing functions that are currently done in-house, as well as consolidating like functions within regional (geographical) areas.

This thesis reviews the applicable business reform initiatives by conducting an extensive literature review of DoD directives, General Accounting Office (GAO) reports, business journals, magazine articles, internet articles and web pages on business reform initiatives in DoD and the Marine Corps, and an opinion survey of senior military and civilian installation leaders. The application of DoD business reform at Marine Corps installations will be determined by conducting a comprehensive archival review of DoD and Marine Corps policies relative to business process reforms. The applicable major reform initiatives and policies identified will be analyzed within an organizational

systems framework model applicable to a complex organization. Conclusions will be drawn on the affects major initiatives have on the operation of Marine Corps installations and recommendations will be made for improving installation business practices.

B. BUSINESS REFORM IN DOD

In the midst of force reductions in recent years, the Department of Defense took a “holiday” from procuring modern weapon systems needed for national defense. Now that the drawdowns have eased and the force structure stabilized, a new problem is emerging. While the force reduced by near 40 percent, the cost of the infrastructure to support them has only reduced by some 25 percent over the same baseline. This disproportionate reduction in infrastructure costs is preventing the acceleration of procurement necessary to overcome the effects of the procurement holiday. The DoD has made a conscious decision to find ways to reduce infrastructure costs, and apply the savings to weapons system modernization. Thus the “Defense Reform Initiative” (DRI) and the “Revolution in Business Affairs” (RBA) were created to help achieve needed savings. (DRI, 1997).

The “business” of operating Marine Corps installations is the system under review in this thesis. Installation operation requires a significant and growing proportion of the Operations and Maintenance budget (O&MMC) at the same time the money is needed for modernization and readiness improvements in the fleet. Historically, base operation has not been considered a true business, but rather part of the mission to be accomplished like any other military objective. All military services have attempted to maintain the ability to be self-sufficient in base operation. The expected norm is

providing base operation products and services with in-house resources. How efficient and effective the services are provided is only a secondary concern and constrained by the requirement to be self-sufficient. (Ackerman, 1997).

The Department of Defense Revolution in Business Affairs and Defense Reform Initiative are both attempts to change the reliance on self-sufficiency and in-house service providers. The status quo in base operations is no longer acceptable. The priorities have been changed from self-reliance to providing efficient and effective products and services.

C. AREA OF RESEARCH AND RESEARCH QUESTIONS

The primary purpose of this thesis is to conduct a comprehensive review and analysis of the affect DoD business process reform initiatives are having on the operation and management of Marine Corps installations. The research will identify recent DoD reform mandates impacting operation of Marine Corps installations, develop an organizational systems framework model of a typical Marine Corp base, and analyze the impact of the business reform initiatives on the operation of installations. The analysis will identify attributes critical to execute the required change successfully.

The primary research question is stated as: *"How are Department of Defense business process reforms changing the way Marine Corps installations are managed and operated?"*

In addition to the primary question, additional secondary research questions will require investigation. Secondary research questions include:

- What elements of the Department of Defense major reform initiative affect operation of Marine Corps installations?
- What impact does the Department of Defense major reform initiative have on the operation of Marine Corps installations?
- What is the current state "*organizational systems model*" for a typical Marine Corps base organization?
- What Base operations changes have been initiated by the Marine Corps because of the Department of Defense major reform initiative?
- What external environment factors are contributing to the changes in business processes?
- What installation business practice mandates to the Marine Corps have changed?
- What Marine Corps installation organizational system elements must change to support Department of Defense major reform initiatives?
- What lessons learned from other public and private organizations can be applied to the Marine Corps?
- What are the essential skills required by Marine Corps installation leaders to ensure successful implementation of the mandated changes?

D. SCOPE

The primary thrust of this study will be to conduct a comprehensive review and analysis of recent DoD business reform initiatives and the impact they have on operation of Marine Corps installations. The reform initiatives will be limited to those that significantly impact the operation or management of a major Marine Corps installation and require change to current operations. The analysis will be based on an organizational systems framework model applied to a Marine Corps installation as the system under change. Conclusions will be drawn from the results of the review and analysis, and recommendations made in support of successful system change implementation.

E. METHODOLOGY

The required research is predominantly in the inductive mode. The primary strategy in this thesis will be archival research. A secondary strategy will be opinion based on a survey of senior military and civilian installation leaders. The source of data will consist of the following:

- Conduct an extensive literature review of DoD directives, General Accounting Office (GAO) reports, business journals, magazine articles, internet articles and web pages on business reform initiatives in DoD and the Marine Corps.
- Conduct a comprehensive archival review of DoD and Marine Corps policies relative to business process reforms.
- Conduct a survey of senior military and civilian Marine Corps installation leaders.

- Analyze the applicable major reform initiatives and policies identified within a systems framework model applicable to a complex organization
- Develop and present recommendations and conclusions for successful change based on the systems analysis.

F. BENEFITS OF RESEARCH

This thesis will provide an analysis of the impact DoD business reforms are having on Marine Corps installation operations. The analysis will be presented in terms of an organizational systems framework. This thesis is intended to assist Marine Corps installation leaders with the arduous task of successfully implementing business reforms.

G. ORGANIZATION OF STUDY

This thesis is organized into six chapters. Chapter I provides an introduction and background, area of research and research questions, scope and methodology. Chapter II introduces the reader to a theoretical foundation of an organization and how an organization is represented as a system. The building blocks of organization, organizational system, and organization design are consolidated into the Organizational Systems Framework. Chapter III discusses the major business reform initiatives in DoD and which of these mandates will impact the operation of Marine Corps installations. Chapter IV investigates the affect of business reform initiatives on Marine Corps installation management practices. Organizational elements are discussed using the Organizational Systems Framework. Survey data and analysis are presented in Chapter V

also using the organizational systems framework. Chapter VI provides conclusions and recommendations of the researcher.

II. ORGANIZATIONAL SYSTEMS

A. INTRODUCTION

This chapter builds a theoretical foundation for an organizational systems framework that will be used to analyze the affects major change initiatives mandated by DoD have on the operation of Marine Corps installations.

Organizations are first described as systems composed of fundamental organizational elements. Beginning with the basic Open System Model, organizations are explained in terms of inputs transformed into usable outputs by interrelated elements functioning in a greater external environment. The outputs provide error correction information back to the input through feedback mechanisms. The Basic System Model is expanded into the Congruence Model. Organizational elements are further refined and the property of "fit" is introduced. The idea of a transformation process is introduced and defined. Strategy is introduced as an interconnecting link between input and transformation. Output is expanded to include the individual, the unit and the system. Organizational design and the Star Model are discussed. Design policies in five intertwined categories of strategy, structure, process, rewards, and people are introduced and defined.

The building blocks of organization, organizational system, and organization design are consolidated into the Organizational Systems Framework. The organizational

elements are further defined into environment/context, key success factors, system direction, design factors, culture, outputs, and outcomes.

The final section of this chapter introduces organizational change and a two-dimensional change model. The concepts of incremental versus strategic change are discussed.

The theoretical tools discussed in this chapter, especially the Organizational Systems Framework, will be used to analyze the effects major change initiatives mandated by DoD have on the operation of Marine Corps installations.

B. ORGANIZATION

Organization can be defined as a structured social system consisting of groups and individuals working together to meet some agreed upon objectives. Organizations consist of structured social units of people designed to work together toward achieving a common goal. (Greenberg, 1999) Organizational structure refers to the way groups and individuals are arranged within an organization with respect to the tasks they perform. Organizational design refers to the process of coordinating the structural elements to achieve the desired outcomes in an effective manner.

The structure of an organization is traditionally illustrated by a diagram of the connections between the various clusters and functions called an organization chart. Although some elements of the organization structure (e.g. hierarchy of authority and span of control) may be represented by the organization chart, the actual structure is an abstract concept that cannot be illustrated by a simple diagram.

A more definitive method to represent the structure of an organization is offered by Henry Mintzberg. He postulated that organizations are composed of five basic elements as shown in Figure 2-1. (Mintzberg ,1983, 1989).

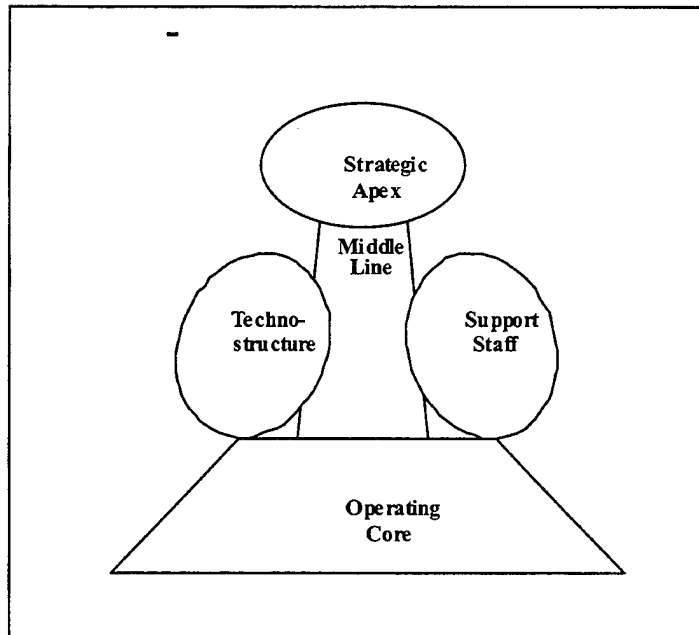


Figure 2-1 Mintzberg's Basic Organizational Model

- **Operating Core:** Employees who perform the basic work of the organization. Examples include carpenters in a construction business and teachers in schools.
- **Strategic Apex:** Top-level executives with responsibility for directing the entire enterprise.
- **Middle Line:** Managers charged with the transfer of information from the strategic apex to the operating core.

- **Technostructure:** Specialists with responsibility for standardizing activities.
Also called analysts and charged with planning work for others.
- **Support Staff:** Individuals who provide indirect support to the organization.

These five basic organizational structure elements are present in all organizations to some degree however any one element can dominate. Consideration of a single dominant element led Mintzberg to identify five specific organization designs, Simple Structure, Machine Bureaucracy, Professional Bureaucracy, Divisional Structure, and Adhocracy.

- **Simple Structure:** All decision-making authority resides at the strategic apex and the hierarchy is flat. This design is characteristic of a small informal organization
- **Machine bureaucracy:** Power resides with the technostructure. The work is highly specialized and decision-making is concentrated at the top. These organizations are highly stable and efficient, however resistant to change.
- **Professional bureaucracy:** In this type of organization, power is with the operating core. They have authority to make decisions needed but do not work alone. Examples are medical doctors and university professors. These organizations are highly effective but sometimes overly narrow and fail to see the "big picture".
- **Divisional Structure:** The classic divisional organization is General Motors. The middle line is where the power resides. Top executives are free to

concentrate on strategic decisions as the day-to-day operations are managed by the divisional managers. These organizations tend to have a high degree of duplication within the divisions.

- **Adhocracy:** The power resides with the support staff. There are few formal rules and regulations. The employees are working together with little direction from authority. This type of design structure is represented by most software startup companies. The organization is a highly innovative environment but can be very inefficient.

C. ORGANIZATION SYSTEM MODELS

Organizations are most commonly visualized as the pyramid-shape characteristic of the organization chart typical of a classical hierarchical structure. Nadler (1997) states that there is a growing tendency to view organizations as a system.

This new perspective stems from repeated observations that social organisms display many of the same characteristics as mechanical and natural systems. In particular, some theorists argue that organizations are better understood if they are thought of as dynamic and "open" social systems.

1. Open System Model

A system is a set of interacting and interrelated parts. (Bolman, 1991). The basic open system consists of a transformation process that converts inputs into usable outputs. The inputs are influenced by the open environment directly, and the internal environment

through some feedback mechanism from the output. Figure 2-2 illustrates an open system model.

Organizations display many of the same characteristics as the basic system. First, there is internal interdependence. Changing one component of an organization will frequently impact another interconnected component. Second, feedback allows organizations to correct mistakes or to change themselves. Third, the desired or normal state of an organization parallels the balance or equilibrium of a stable basic system. Fourth, systems can produce equivalent outputs with very different configurations. Finally, successful systems maintain stable outputs because of their ability to adapt to changing environmental inputs.

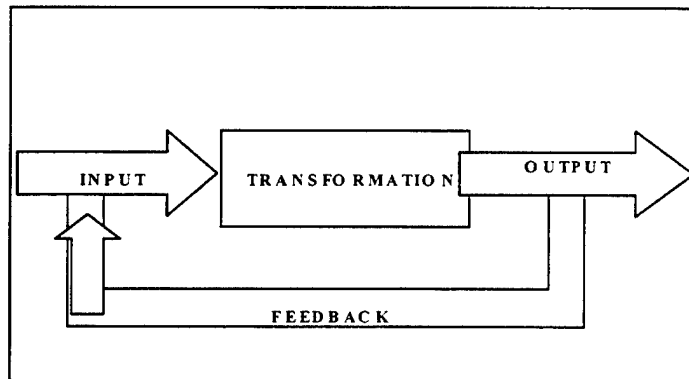


Figure 2-2 Open System Model

2. The Congruence Model

Building upon the basic system model, Nadler and Tushman together with other organization researchers developed a conceptual framework of organization behavior that they call the Congruence Model. This model views the components of an organization as existing together in various states of balance they term "fit." The higher the degree of fit or "congruence" among the components, the more effective the organization. (Nadler, 1997) The elements of an organization are input, strategy, transformation process and output as illustrated in Figure 2-3.

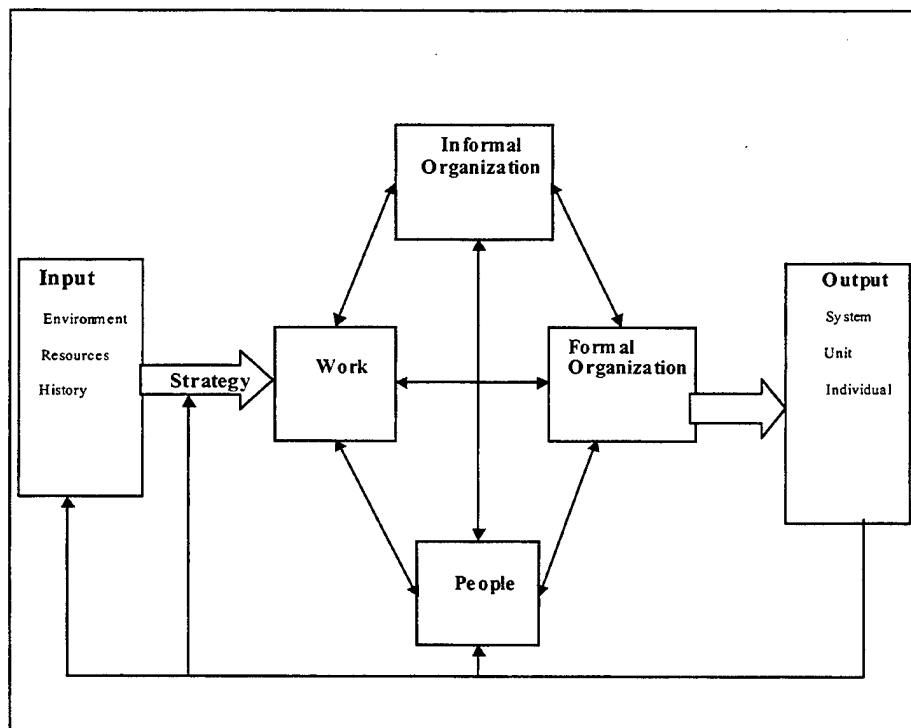


Figure 2-3 The Congruence Model

a. Input

An organization does not have the ability to independently establish system inputs and must respond to the given conditions at any specific point in time. There are three main categories of inputs that affect the actions of an organization in different ways.

- **Environment:** Organizations exist as systems within larger external environments. The external environment influences the organization through the actions of people, social and economic forces and legal constraints. The environment often makes demands on the organization and imposes constraints on the organization's actions. At the same time the environment offers opportunities for the organization to succeed.
- **Resources:** Resources include both tangible and intangible assets. Tangible assets are the employees, capital, technology and information that an organization contains. Perception of the organization and organizational culture are examples of intangible assets.
- **History:** Research indicates that the way an organization functions in the present is greatly influenced by how it responded in the past (Nadler, 1991). Behavior of key leaders, response to past crises, and evolution of values all contribute to the how an organization will act.

b. Strategy

Strategy flows from a shared vision of the organization's future. Strategy can be defined as explicit choices about markets, technology, and competencies an organization intends to pursue. The choices are business decisions on the allocation of scarce resources against the demands, constraints and opportunities offered by the environment. (Bolman, 1991).

c. Output

Output describes not only what an organization produces, but also how well it performs. Collectively, the performance of the individuals and groups within the system define the performance of an organization. The performance of an organization is specified by how well it uses the available resources in support of meeting strategic objectives, and further how well the strategy has been achieved. A third measure of success is how well the organization adjusts to a changing environment, both to seize opportunity and to defend against threats.

d. Transformation Process

The transformation process represents how the organization converts inputs into outputs. The organization consists of four distinct components: The work or tasks to be accomplished, the individuals or people who do the tasks, the formal organization or structure and the informal organization or culture.

- **The work.** The basic or inherent tasks to be done by the individuals, groups or entire organization.
- **The People.** The collective knowledge, skills, abilities and experience of the individuals tasked to do the work.
- **The Formal Organization.** The structure of the organization including policies, processes and methods formally created to get individuals to perform the tasks.
- **The Informal Organization.** The unwritten informal norms, values, beliefs, and accepted behaviors that evolve within an organization. The informal organization is often referred to as organizational culture or operating environment.

D. ORGANIZATIONAL DESIGN FRAMEWORK

Organizational design is a tool used by management to effectively shape decisions and influence employee behavior. Design choices can be viewed as a series of fundamental policies established by management. An effective organizational design requires management to be skilled at developing these design policies. Figure 2-4 illustrates one framework commonly used for organizational design called "the star model". In the star model design policies are categorized by the five intertwined categories of strategy, structure, processes, reward, and people. (Galbraith, 1995)

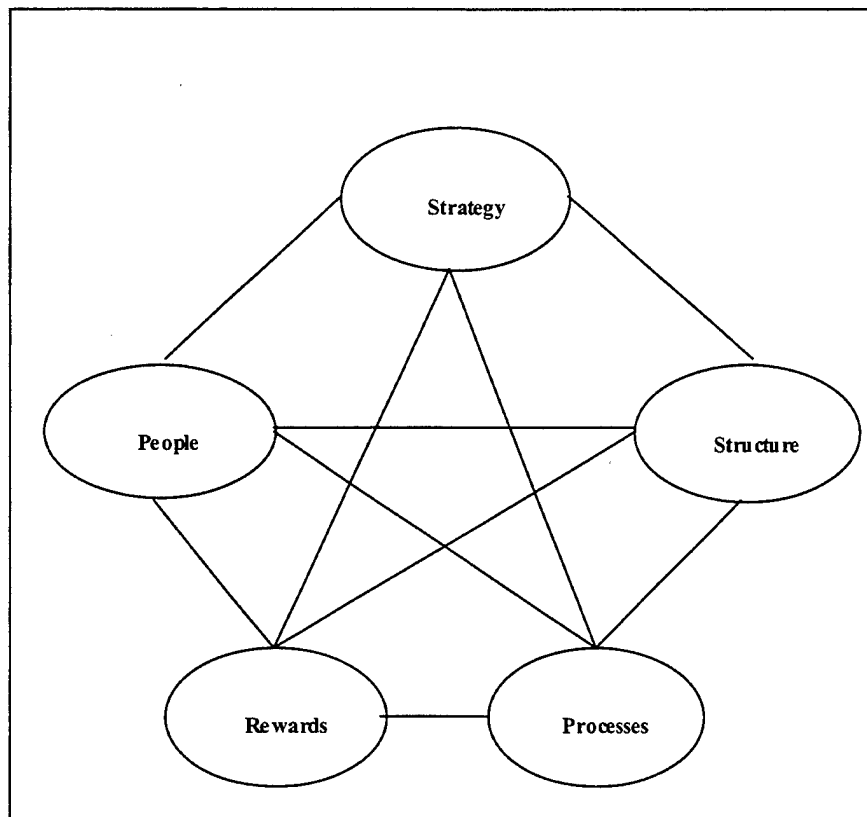


Figure 2-4 The Star Model

1. Strategy

Strategy specifies the direction of the organization in terms of mission, values, goals and objectives. Strategy is typically the first organizational component to be addressed because it establishes the criteria for choosing among alternative organizational forms.

2. Structure

The placement of power and authority are determined by the organization structure. Structure policies can be categorized into four areas. The first category is specialization, which refers to the number and type of job specialties. The second category is shape, which refers to the number of people and span of control at each level of the organization. Third is the distribution of power in two dimensions. The vertical dimension represents the classical centralized or decentralized distribution while the horizontal dimension refers to the lateral flow of power to the departments dealing directly with mission. Finally, the fourth category is departmentalization referring to the formation of departments around the standard dimensions of functions, products, workflow processes, markets, and geography.

3. Processes

Decision and information system processes link the organization in both the vertical and horizontal directions. Vertical processes operate to allocate the scarce resources of human talent and funds. Horizontal or lateral processes link organizational elements around workflow. (Galbraith, 1995).

4. Rewards

Reward systems provide incentive and motivation for accomplishment of goals supporting strategic direction as set by management. The purpose of a reward system is to align employee goals and direction with the goals of the organization.

5. People

The human resource policies of recruiting, selecting, employee development, education and training produce the human talent required to achieve the strategic direction specified by management. Specifically, the human resource policies build the organizational capabilities to execute the strategic direction.

E. ORGANIZATIONAL SYSTEMS FRAMEWORK

The organizational models discussed provide the ability to analyze specific elements of organizations. The organizational systems framework (Roberts, 2000) illustrated in Figure 2-5 consolidates the attributes of these models with others to provide a more comprehensive tool for total organization analysis. This thesis will use the organizational systems framework for analysis.

Organizational Systems Framework

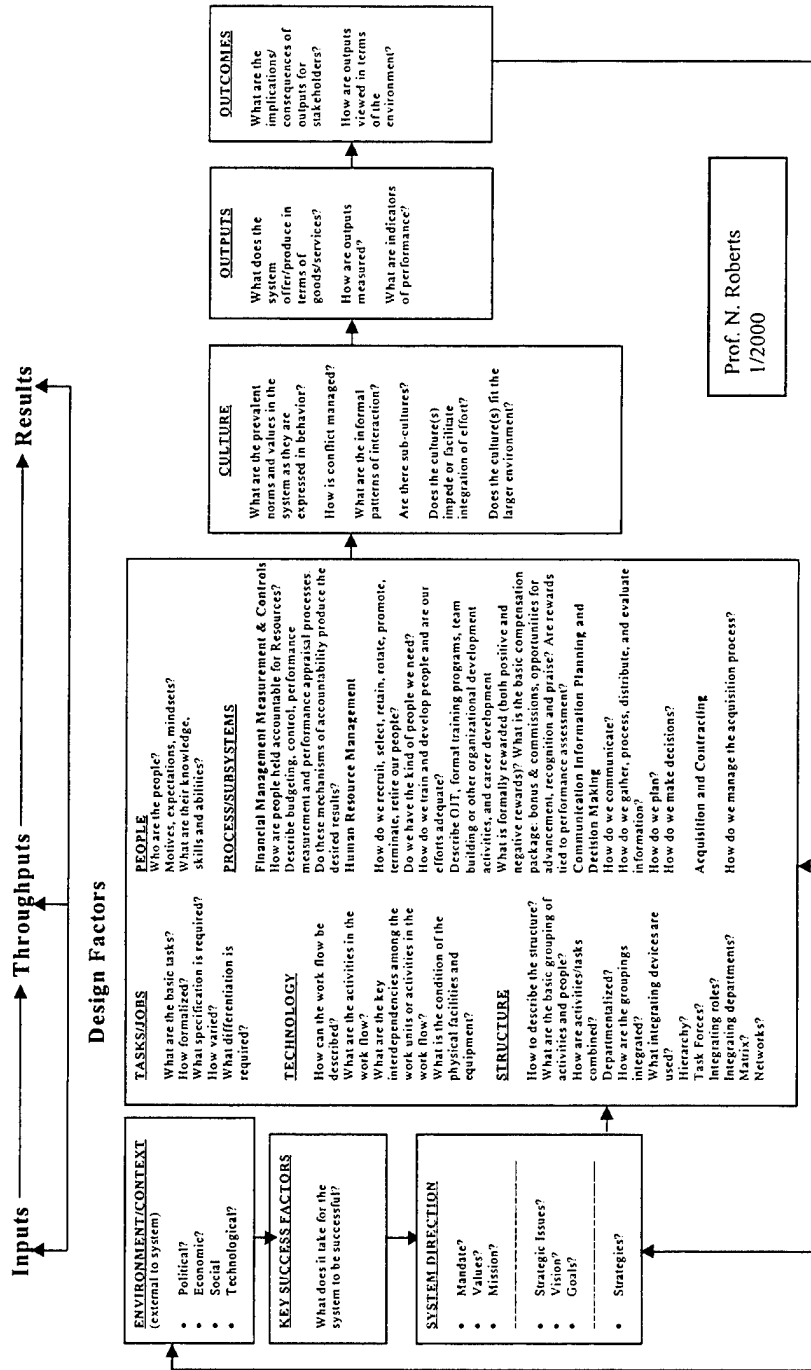


Figure 2-5 Organizational Systems Framework

1. Environment/Context

Environment refers to the larger external environment. The system co-exists within this larger environment. The external environment influences the organization through the actions of people, social and political factors, technological and economic forces, and legal constraints. The environment often makes demands on the organization and imposes constraints on the organization's actions. At the same time the environment offers opportunities for the organization to succeed.

In addition to the external environment, the context means resources and history of the organization. Resources include both tangible and intangible assets. Tangible assets are the employees, capital, technology and information that an organization contains. Perception of the organization and organizational culture are examples of intangible assets. The history of an organization greatly influences the way it functions in the present. Past behavior of key leaders, response to past crises, and evolution of values all contribute to how an organization will act.

2. Key Success Factors

What does it take for the system to be successful? Key success factors are the critical indicators against which an organization must demonstrate at least adequate performance if it is to prosper. The specific factors will differ for each organization and are likely to be more numerous and inherently more ambiguous for public organizations (Nutt and Backoff, 1992, 1993).

Although specific key success factors will vary, some generalizations such as Peters' and Waterman's (1982) eight "excellent" criteria for characterizing successfully managed companies may be useful. The eight criteria include:

- **A bias for action.** Companies that meet this criterion quickly identify problems, find answers, and implement them.
- **Close to the customer.** Excellent organizations spend a great deal of time and effort listening closely to what their customers want, and strive to meet those needs in a way that emphasizes quality, reliability, and service.
- **Autonomy and entrepreneurship.** Excellent companies promote innovation and risk taking.
- **Productivity through people.** People are viewed by excellent companies as a valuable resource--indeed, their most valuable resource.
- **Hands-on, value-driven.** Excellent companies all have a clearly articulated philosophy and set of key values, and their executives and employees behave in accord with them. People are deeply involved; they live the business.
- **Stick to the knitting.** The excellent companies do not move far from the business that they know how to run. They have core businesses that remain the core; they do not pursue ideas or acquisitions that are at odds with those businesses.

- **Simple form, lean staff.** Structural forms are kept simple, and corporate staffs are kept relatively small.
- **Simultaneous loose-tight properties.** Excellent companies have some core values to which they cleave almost fanatically, but at the same time, they promote decentralization, and autonomy in decision-making and action as long as they are in accord with the core values.

3. **System Direction**

System direction is a management process that converts input to the organization from the external environment (including higher authority) into steering or guiding direction for the entire organization. Direction setting is one point where management can intervene in order to cause a change in the organizational system. The overall system direction is determined by the following critical attributes.

a. Mandate

Mandates are both formal and informal requirements on what to do (and not do) from external authorities. Formal mandates are typically codified in laws, regulations and the like. Informal mandates are generally embodied in cultural norms and expectations of stakeholders. (Bryson, 1995).

b. Values

The values of an organization are part of a belief system that determines behavioral norms. Underlying organizational values drive decisions, particularly those decisions that determine future direction. Values are typically part of an organizational philosophy of operations and help explain how an organization approaches its work, manage internal affairs, and relate to the external environment. Values can differ between organization segments and especially individuals.

c. Mission

Mission is simply the purpose or reason an organization exists.

d. Strategic Issues

Strategic issues are fundamental policy questions or challenges that affect an organization's mandates, values, or mission. (Ansoff, 1980).

e. Vision

A vision provides clarity of an organization's direction and purpose. Vision specifies success in terms of mission, core values, basic strategies, goals and performance factors, ethical standards and important rules for decision-making. A vision should illustrate a future state and a path to get there.

f. Goals

Assignment of specific, challenging, yet achievable goals can lead to enhanced organizational performance. Feedback concerning goal attainment is a critical element in the effectiveness of goal setting. (Locke, 1990).

g. Strategies

Strategy specifies the direction of the organization in terms of mission, values, goals and objectives. The pattern developed by organizational policies, programs, actions, decisions, and resource allocation define a strategy. Strategy is typically the first organizational component to be addressed because it establishes the criteria for choosing among alternative organizational forms.

4. Design Factors

Organization design factors refer to the individual elements and the construct of an organization. The design factor elements included in this model are similar to the Congruence Model transformation process. Each of the design factors may be modified by management intervention to obtain system change. The congruence or "fit" of these elements is critical to the overall system operation.

a. Tasks/Jobs

The work of an organization is comprised of the basic or inherent tasks to be done by the individuals, groups or entire organization. Jobs are structured and arranged around the tasks to be accomplished.

b. Technology

Technology refers to the processes, both physical and mental, used to transform inputs into usable outputs. In this context technology is more than technological devices and equipment used by people, but includes their knowledge and activities as well. Technology affects the behavior of individuals and the functioning of organizations. Enhancing the technology of an organization can lead to more efficient and effective transformation of inputs into outputs.

Charles Perrow (1967) provides a useful way to categorize technology of an organization in two basic dimensions. The first dimension is called exceptions, the degree to which an organization makes use of standard inputs to turn out standard outputs. If the process encounters few exceptions during the transformation, the technology is labeled as routine. If many exceptions occur, the technology is labeled as nonroutine. Perrow's second dimension, called problems, refers to the degree which the situations encountered must be analyzed. (Greenberg, 1999). If the situations allow for programmed decision-making, the problem is classified as easy to analyze. Problems that are complex and require nonprogrammed decision-making are classified as difficult to

analyze. Using these two dimensions, Perrow identified four specific technology types as summarized in Table 2-1.

Exceptions	Problems	Technology Type
Few	Easy to analyze	Routine Technology (e.g., assembly line manufacturing, vocational training)
	Difficult to analyze	Craft Technology (e.g., cabinet making, public schools)
Many	Easy to analyze	Engineering Technology (e.g., heavy machinery construction, health and fitness club)
	Difficult to analyze	Nonroutine Technology (e.g., research unit, psychiatric hospital)

TABLE 2-1 PERROW'S MATRIX OF TECHNOLOGIES

The first technology type is known as routine technology. Highly standardized inputs and outputs with few problems that are easy to analyze are characteristic. Examples would include assembly line manufacturing and vocational education.

When inputs and outputs are highly standardized but encountered problems are more difficult to analyze the technology is characteristic of Perrow's second type called craft technology. Examples of craft technology are cabinetmakers and public schools.

The third technology type is called engineering technology and is characterized by many exceptions that can be dealt with in standard ways. Examples would include heavy machinery construction, and health and fitness club operation.

Finally, operations with many exceptions that are difficult to analyze are classified as nonroutine technology. Examples would include research and development, and psychiatric hospitals.

c. *Structure*

Organizational structure refers to the way groups and individuals are arranged within an organization with respect to the tasks they perform. The structure of the organization is typically established based on the policies, processes and methods formally created to get individuals to perform the tasks. An important consideration is the organization design or the process of coordinating the structural elements to achieve the desired outcomes in an effective manner.

d. *People*

There is substantial evidence of a strong connection between how an organization manages their people and the success it will achieve. (Pfeffer, 1999). Understanding the experience and background, motives, expectations and mindsets of their people is of critical importance to an organization.

e. *Processes/Subsystems*

Processes and subsystems are what interconnect and link the elements or design factors of an organization together.

- ***Financial Management, Measurement and Controls***

Financial management, budgeting and control are fundamental processes of organization management. Accountability and control are the steps a manager takes to assure performance conforms as near as practical to plan. (Newman, 1975)

- ***Human Resource Management***

Human resource management includes the policies of recruiting, selecting, employee development, education and training that produce the human talent required to achieve the strategic direction specified by management. Also included in human resource management are the reward systems that provide incentive and motivation for accomplishment of goals. The purpose of a reward system is to align employee goals and direction with the goals of the organization. Human resource policies build the organizational capabilities to execute the strategic direction set by management.

- ***Communication, Information, Planning, and Decision Making***

Decision and information system processes link the organization in both the vertical and horizontal directions. How information is gathered and processed are important considerations in decision-making and communication processes.

- ***Acquisition and Contracting***

Another important process of an organization is what goods and services are obtained from external sources, and how they are procured.

5. Culture

Nadler and Tushman (1997) identify the basic components of organizational culture as values, beliefs, and norms. Organizational core values are what an organization "believes" to be good or bad. These values cannot be proved or disproved, either you agree or disagree. Beliefs are specific views on how the world works. Beliefs may or may not be true and are open to debate. Beliefs are often built around cause and effect relationship. Norms represent the behavior or expectation of behavior caused by the values and beliefs of an organization.

Organizational culture cannot be acted upon directly by management intervention. Management causes a cultural change by intervening in system direction setting or organization design factors. Organizational culture is a result of behavior and attitudes of the people within the organization. To effect a cultural change, it is necessary to change design factors that will cause a change in attitudes and behavior. (Beer, 1990).

6. Outputs

Output describes the goods or services the organization produces in very general terms. One indicator of success for the organization can be measured in terms of output. Performance can be determined in terms of three factors. First, how well does the organization meet strategic objectives. Second, how well does the organization use scarce resources. Third, how successful the organization is at positioning itself to seize the opportunities and stave off the threats presented by the environment.

7. Outcomes

The outcomes of an organization can be defined as the consequences or implication of the outputs to stakeholders. Outcomes must be viewed by the organization in context with the external environment.

F. ORGANIZATIONAL CHANGE

Organizational change may involve one or more elements of the organizational system, or may involve realignment of the entire system and affect all critical elements. Managing issues during the change process becomes a fundamental concern. Beckhard and Harris (1977) identified three critical issues for maintaining congruence during the change process. (1) Managing the political dynamics associated with the change process. (2) Motivating constructive behavior of the workforce with the anxiety created by the change. (3) Actively managing the transition process to a new end state.

Later Nadler and Tushman (1989) identified additional issues when applied to large-scale, complex organizational change. Large-scale complex change involves some or all of the following attributes.

- **Multiple transitions.** Complex change involving many different transitions simultaneously. They individual transitions may be independent of each other.
- **Incomplete transitions.** Many of the complex changes may be overcome by events before they are completed. Some may be replaced by subsequent changes while others cease.

- **Uncertain future states.** The end-state resulting from a complex change may be too difficult to describe. Other times the target end-state evolves as the change process unfolds.
- **Transitions over long periods.** Large-scale change processes can take three to seven years to implement. The dynamics required to manage long period change are different from short term.

Organizational change can be considered in two dimensions as illustrated in Figure 2-6. The first dimension considered is scope. Changes that focus on individual organizational elements and maintain or re-establish congruence are "incremental" changes. Changes that break organizational congruence and involve the entire system or strategy are "strategic" changes. The second dimension views the change in relation to external events. Changes that are responses to specific events are called "reactive." Changes initiated prior to or in anticipation of an event are called "anticipatory" changes.

	Incremental	Strategic
Anticipatory	Tuning	Reorientation
Reactive	Adaptation	Re-creation

Figure 2-6 Types of Organizational Change

The following four categories of change result.

- **Tuning.** Change that is incremental in anticipation of a future event. This type of change seeks to increase organizational efficiency without an immediate problem driving the change.
- **Adaptation.** Incremental change made in response to a trigger event. The event requires change in one or more of the organizational elements but does not require fundamental change throughout the entire organization.
- **Reorientation.** Strategic change requiring redirection of the entire organization, but with the need for change having been made in advance of an event that would ultimately require the change. Nadler and Tushman (1989) refer to this level of change as "frame-bending" because the intent is to bring about significant change without "breaking" the organizational frame.
- **Re-creation.** Strategic change usually initiated in response to a trigger event that threatens the very existence of the organization. Response to the event requires a radical change in the organization.

The intensity or severity of impact the change has on the organization ranges from low to high. See Figure 2-7 for illustration. Strategic change, and specifically re-creation is the most severe, while anticipatory change is lower, with tuning having the least impact.

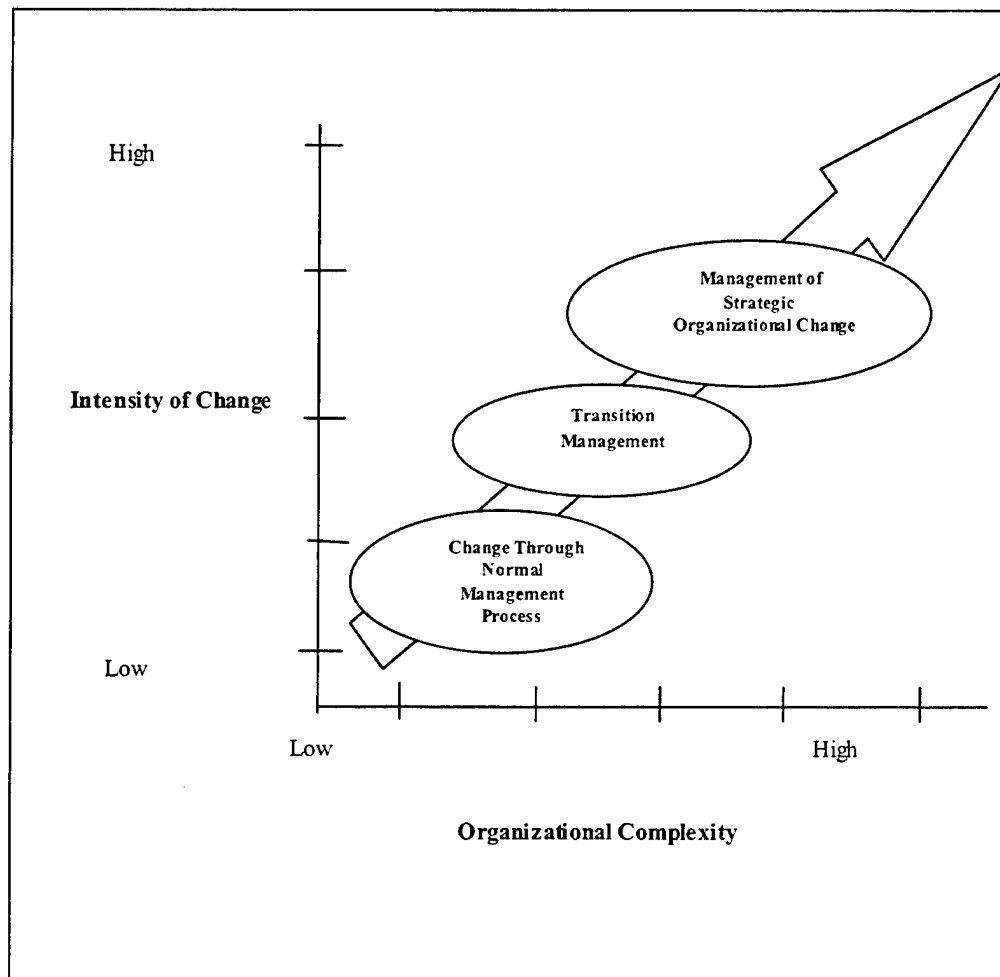


Figure 2-7 Types of Change Management

G. SUMMARY

This chapter describes a theoretical framework for organizations, organization systems, and organizational change that can be used to analyze organizations undergoing major change. The first section draws from Mintzberg's fundamental organization structure view and defines the interrelation of his five basic organizational elements.

Organizations are next described as systems composed of fundamental organizational elements. Beginning with the basic Open System Model, organizations are explained in terms of inputs transformed into usable outputs by interrelated elements functioning in a greater external environment. The outputs provide error correction information back to the input through feedback mechanisms.

The Basic System Model is expanded into the Congruence Model of Nadler and Tushman. Organizational elements are further refined and the property of "fit" is introduced. Input is defined in terms of the components of environment, resources, and history. The idea of a transformation process is introduced and defined in terms of work, people, formal, and informal organization. Strategy is introduced as an interconnecting link between input and transformation. Output is expanded to include the individual, the unit and the system.

Organizational design and the Star Model of Galbraith are discussed next. Design policies in five intertwined categories of strategy, structure, process, rewards, and people are introduced and defined.

The building blocks of organization, organizational system, and organization design are next consolidated and the Organizational Systems Framework provided by Roberts is introduced. The organizational elements are further defined into environment/context, key success factors, system direction, design factors, culture, outputs, and outcomes. Each specific element is expanded and the interrelationship between elements discussed.

The final section of this chapter introduces organizational change and a two-dimensional change model provided by Nadler and Tushman. The concepts of incremental versus strategic change are discussed.

The theoretical tools discussed in this chapter, especially the Organizational Systems Framework, will be used to analyze the affects major change initiatives mandated by DoD have on the operation of Marine Corps installations.

III. DOD BUSINESS REFORM INITIATIVES

A. INTRODUCTION

This chapter discusses major business reform initiatives DoD has initiated and summarizes what measures are expected to have a major impact on changing Marine Corps installation management practices. The discussion begins by reviewing events that have led to the need for business reform. An aging population, the end of the Cold War, and a quarter century of deficit spending, has all contributed to substantial pressure for reducing defense expenditures.

The United States is at a technological transition point, moving into the "Information Age" and entering a period of a "Revolution in Military Affairs" (RMA). The military services and DoD are engaged in transformational change to support the RMA needs at the same time that fiscal reality is demanding reduced budgets. Clearly, the resources to support the RMA transformation must come from elsewhere within the DoD. Thus a "Revolution in Business Affairs" (RBA) has evolved to redefine business functions and performance in order to increase efficiency while maintaining the effectiveness of DoD support functions. The RBA is expected to yield resources necessary to reinvest in the transformation.

The military service Joint Chiefs of Staff (JCS) published Joint Vision 2010 a template for the evolution of the armed forces into the 21st century. The document identifies the operational concepts of dominant maneuver, precision engagement, full

dimension protection and focused logistics as the tenets of full spectrum dominance that will be the essential characteristic for the armed forces in the next century.

The DoD initiated a Defense Science Board (DSB) Task Force to investigate how privatization and outsourcing could effect cost savings, quality improvements, and increased efficiencies for DoD activities while releasing financial and human resources to enhance readiness and modernization. The Task Force was directed to study and address activities DoD is currently doing that could be performed by the private sector with greater efficiency, at lower cost, and with higher quality. The Task Force investigated both public and private sector experiences to determine the process DoD should follow to carry out an effective privatization and outsourcing program. The Task Force reviewed lessons learned to determine what DoD should take into consideration when implementing an outsourcing plan.

The Quadrennial Defense Review (QDR) process is intended to examine DoD strategy, force structure, modernization and infrastructure once every four years. The focus of the QDR was to build a solid financial foundation that would support the future warfighting capabilities described by Joint Vision 2010. Congress, dissatisfied with the slow pace of reform in the DoD by the executive branch, hoped to accelerate the restructuring of the department with the QDR.

The transformation of the forces is achievable, but dependent on our ability to shift resources from overhead and support functions by bringing about a "Revolution in Business Affairs" (RBA). The Defense Reform Initiative (DRI) strives to achieve the RBA. The DRI will be guided by the principles of focusing the enterprise on a unifying

vision, commitment of the leadership team to change, focusing on core competencies, streamlining organizations for agility, investment in people, exploiting information technology, and breaking down barriers between organizations.

The DRI applies the guiding principles to define initiatives in four areas. The first area is reengineering by adopting modern business practices to achieve world-class standards of performance. The second focus area is consolidating by streamlining organizations to remove redundancy and maximize synergy. The Third area is competition by applying market mechanisms to improve quality, reduce costs, and respond to customer needs. The fourth focus area is elimination by reducing excess support structures to free resources and focus on core competencies.

The Military force Structure Act of 1996 required the convening of a National Defense Panel (NDP) to report on the significant issues facing DoD as it transitions into the 21st century. The panel evaluated the future operational environment from 2010 to 2020 against the force capabilities necessary to meet defense challenges of the future. The NDP viewed fundamental reform of the DoD support infrastructure as a critical element necessary to support a successful transformation strategy for 2010-2020. The report noted that DoD infrastructure of today was unaffordable and that meaningful reform was not possible unless DoD embraced a more effective business-like approach.

Over the past decade, the private sector has successfully transformed their business practices in response to increasing global competition. The Department of the Navy (DoN) views these changes as revolutionary and hopes to capture some of the same innovation to dramatically improve similar Navy business functions. According to a

report from the Naval Studies Board (NSB), DoN expects the RBA will achieve between \$3.5 and \$5.0 billion in annual savings for modernization.

B. FISCAL BACKGROUND

With the end of the Cold War came the expectation for a peace dividend. The American public and the Congress believe a smaller military force and reduced DoD budgets should result from the demise of the Soviet threat. The United States dominates the world as never before. Not only do we enjoy the largest and most productive economy, our troops have the most advanced equipment and our defense spending accounts for one-third of the entire world's defense outlays. (Bandow, 1998).

Some would argue that a smaller force is justified because there is no viable major military threat on the horizon for at least the next 15 years. (George, 1999). Others point to escalating entitlement spending as a more tangible and immediate reason for reducing the defense budget. Mandatory spending on interest and entitlements will have grown from 22.7 percent to 72 percent of the Federal budget over the forty years from 1963 to 2003. Figure 3-1 shows how the mandatory spending has grown. (CBO, 1999)

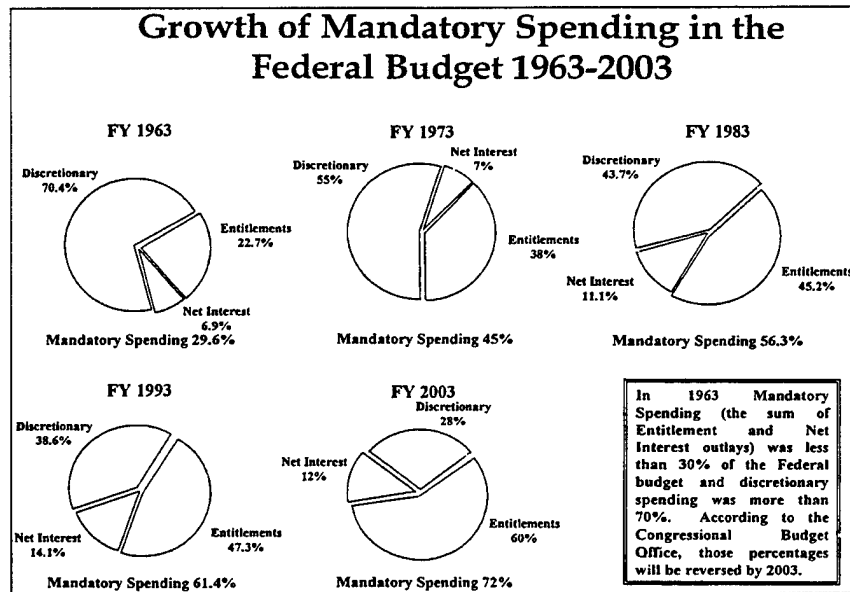


Figure 3-1 Mandatory Spending

The largest force behind the continued growth in entitlement spending is the rapid rise in spending for Medicare and Medicaid. (Crippen, 1999) Assuming no change in policy, Medicare costs are expected to grow from 2.5 percent of Gross Domestic product (GDP) in 1999 to 4.9 percent GDP by 2030. The Congressional Budget Office projects spending on Medicare costs to increase from 13 percent of the Federal budget in 1999 to 20 percent by 2009 and further to 26 percent by 2030 as the baby boomer generation ages. As the mandatory portion of the Federal budget increases, there will be less available for discretionary expenses, including national defense. (Steuerle, 1998) Figure 3-2 depicts the increase in all mandatory expenditures.

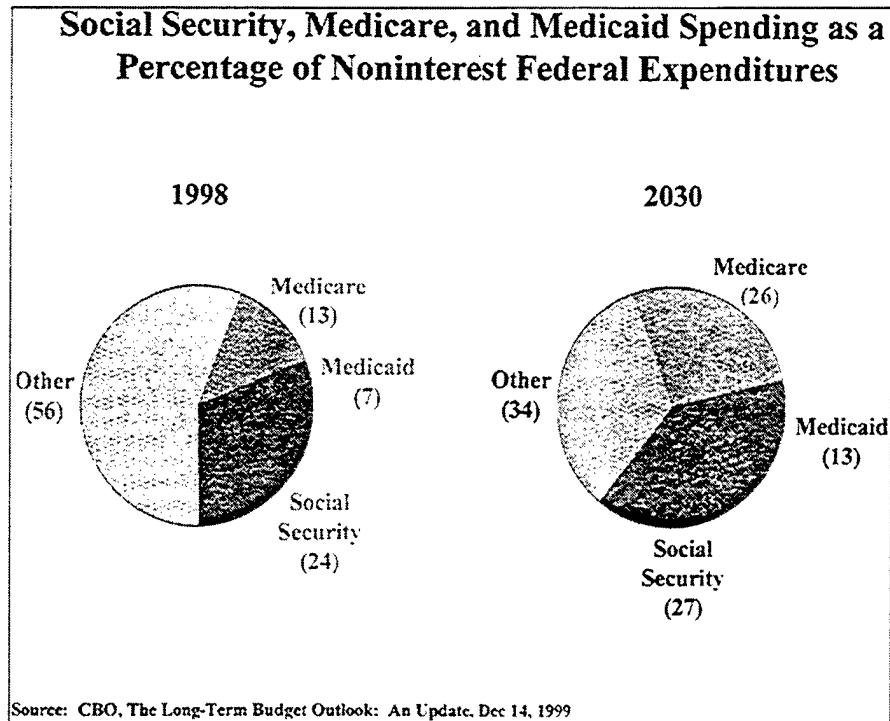


Figure 3-2. Entitlement Expenditures

The rising costs of entitlements have been only one of the concerns with the Federal budget. For a quarter century, the annual expenditures of our Federal government have exceeded the available revenues. The resulting deficit spending has led to a cumulative federal debt of over \$5.6 trillion by 1999. (PresBud, 2000). Just the amount of interest payments required each year results in 12 percent of the total annual budget. The principle represents money borrowed primarily from the American people, including a substantial amount from the Social Security trust fund.

The budget surpluses we see today are chiefly due to three separate acts passed by the congress over the last 10 years to implement sensible fiscal policy. (AARON, 1999)

The first of these bills was the Budget Enforcement Act (BEA) of 1990, which established "caps" or limits on the amount of discretionary spending. The BEA also created mandatory legislation requiring "pay as you go" (PAYGO) as a mechanism to ensure all program increases (or decreases) in expenditures are funded. The other two bills are the Taxpayer Relief Act and the Balanced Budget Act of 1997, both requiring balancing tax increases with spending reductions. These measures have little effect on the mandatory portion of the budget, but result in reduced discretionary funds across the board. Figure 3-3 illustrates the result on federal outlays for FY 2000.

Eliminating the federal budget deficit and reducing the growth of national debt has become a priority within the government. Fiscal policy is as much a reason for reducing the costs of DoD as the end of the Cold War. With the aging of the baby boomer generation, entitlement spending for Medicare and social security will continue to grow at an alarming rate. For these reasons, DoD must find ways to reduce costs.

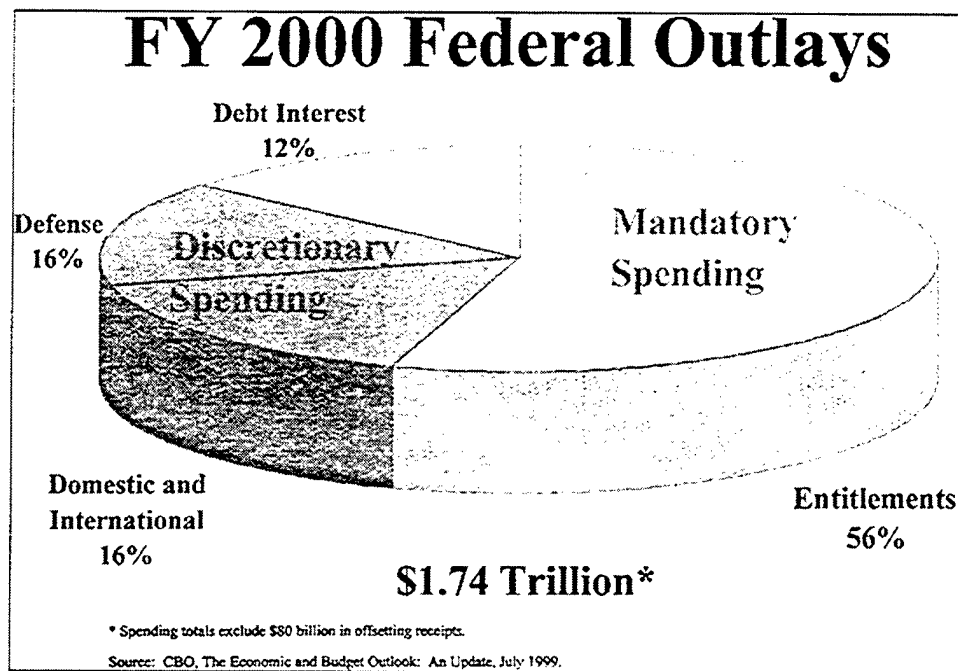


Figure 3-3. Federal Budget Outlays

Cost reduction and reform in the DoD has been a primary concern for the past decade. The first major attempts at reform probably began with the "Bottom Up Review" (BUR) and the Presidents "Commission on Roles and Mission" (CORM) in the early 1990's. The reform initiative became more urgent and a central focus developed near the middle of the decade with the Quadrennial Defense Review, the "Defense Reform Initiative" (DRI) and the "Revolution in Business Affairs" (RBA). Reducing the costs of the support infrastructure through better business practices is expected to release the funds necessary to support modernization.

C. JOINT VISION 2010

The military service Joint Chiefs of Staff (JCS) published Joint Vision 2010 in 1996 as the conceptual template for the evolution of the armed forces into the 21st century. The document identifies the operational concepts of dominant maneuver, precision engagement, full dimension protection and focused logistics as the tenets of full spectrum dominance that will be the essential characteristic for the armed forces in the next century. Although not specifically addressing the supporting establishment infrastructure in detail, several critical success attributes have potentially significant implications.

The vision calls for maintaining a careful balance between the "tooth and tail" of force structure while assuring an efficient and effective support structure is maintained. The balance has become skewed and over 60 percent of DoD's budget is spent on support functions considered as the Tail. (BENS, 1997). In addition, the vision emphasizes that risks and expenditures will be even more closely scrutinized than they are at present when faced with flat budgets and increasingly more costly readiness and modernization. Simply to retain effectiveness with less redundancy, "will require wringing every ounce of capability from every available resource." (Joint Vision 2010, 1996). The vision implies the desired outcome can only be accomplished through a seamless integration of Service capabilities. To achieve this integration, DoD must find the most effective way to be "fully joint" institutionally, organizationally, and technically.

The conceptual template established by Joint Vision 2010 was augmented in 2000 with the publication of Joint Vision 2020. However, no additional information on the supporting establishment infrastructure requirements was provided by the new document.

D. DEFENSE SCIENCE BOARD STUDY

In October 1995 the Under Secretary of Defense for Acquisition and Technology (USD A&T) formed a Defense Science Board (DSB) Task Force on Privatization and Outsourcing. The DSB Task Force was chartered as a "strategy to effect cost savings, quality improvements, and increased efficiencies for DoD activities while releasing financial and human resources to enhance readiness and modernization." (DSB, 1996).

The Task Force was directed to study and address the following issues:

- What activities is DoD currently doing that could be performed by the private sector with greater efficiency, at lower cost, and with higher quality?
- What DoD functions should receive priority attention?
- Based on private sector experience, what levels of savings should be expected?
- How long will it take for savings to be realized and what, if any, up front costs or investment will be required?
- What terms and conditions will encourage or discourage commercial entities from competing for opportunities?
- What process should DoD follow to carry out an effective privatization and outsourcing program?

- What lessons can be drawn from the private sector experience about implementing an outsourcing plan?
- What personnel, accounting, or other organizational implications for implementing privatization should DoD take into consideration?
- What specific actions should DoD take over the next year to accelerate the shift to privatization and outsourcing?

In addition to assessing the outsourcing experience of the commercial sector, the Task Force was also directed to examine experience in other countries, and the United States experience in state and local governments as part of the study. The Task Force final report was published in August 1996. (DSB, 1996).

The Task Force report defines “outsourcing” as a general concept that incorporates the more narrow case of “privatization.” The specific definitions are as follows:

Outsourcing refers to the transfer of a support function traditionally performed by an in-house organization to an outside service provider. Outsourcing occurs in both the public and private sectors. While the outsourcing firm or government organization continues to provide appropriate oversight, the vendor is typically granted extensive flexibility regarding how the work is performed. In successful outsourcing arrangements, the vendor utilizes new technologies and business practices to improve service delivery and/or reduce support costs. Vendors are usually selected as the result of a competition among qualified bidders.

Privatization is a subset of outsourcing that applies only to the public sector. Privatization actions involve not only the contracting out of support functions, but also the transfer of facilities, equipment, and other government assets to private vendors. Government organizations often outsource support functions without privatizing public assets.

The view of the Task Force was that most DoD outsourcing initiatives are not likely to involve asset transfer therefore, the study concentrated on the general concept of outsourcing.

1. The Challenge

The DSB Task Force report noted that the pace of equipment modernization is insufficient to sustain the military forces over the long term. While DoD is well equipped today, procurement levels must grow from near \$38 billion to about \$68 billion in five years just to maintain current levels. Because of deficit reduction efforts and other competing national priorities, top-line defense budgets are not likely to grow significantly and may continue to decline in real terms. (GAO/T-NSIAD-97-187, 1997). Therefore, additional funding for modernization will need to come from reducing costs and shifting existing resources.

The potential sources of additional funds were identified as further force structure reductions, additional base closures and other infrastructure consolidations, and the streamlining of support functions. The Task Force considered further force reductions as impractical and unwise leaving two alternatives. The Task force also evaluated further infrastructure consolidations as unlikely to generate significant savings in the short term, especially given that congress was unlikely to authorize new base closure actions. The

opinion expressed by the Task Force was the only practical alternative was to sharply reduce support costs and to apply the savings to modernization. "If extensive savings are to be achieved, DoD must abandon its traditional reliance on in-house support organizations and support a new paradigm that capitalizes on the efficiency and creativity of the private sector." (DSB, 1996).

2. Private Sector Experience

The private sector initially viewed outsourcing as a method to reduce support costs however, as experience with outsourcing has expanded they have developed a broader view of the benefits. Additional benefits realized from outsourcing include increased ability to concentrate on core competencies, greater access to innovative technologies and business solutions, and improved service quality and responsiveness. (BENS, 1997). The DSB Task Force expects benefits and savings from outsourcing to be significantly higher in the government sector because of the relative inefficient inhouse support providers.

Private sector firms spent an estimated \$100 billion for outsourced services in 1996 resulting in savings of 10 to 15 percent of the total function costs. (Bernasconi, 1996). A 1995 survey by the Outsourcing Institute found that outsourcing firms have achieved significant improvements in quality and customer service. Outsourcing is not only an effective tactic for reducing costs, but has become a critical element of competitive strategy. Outsourcing is a commonly used tool by the private sector and

more than 90 percent believe these initiatives have been successful according to another study conducted by Arthur Andersen in 1995.

Most service providers in the outsourcing industry fall into one of three general business functions: information technology (IT), business logistics, and business services. The functional areas of IT include data center operations, network support, systems integration, software maintenance, application development, and telecommunications. Information technology is the single largest service function accounting for up to two thirds of the value of all outsourcing contracts. Business logistics is the second largest outsourcing functional area and includes the functions of inventory management, warehousing, and transportation services. Business service functions include general administration, benefits administration, and facility management and maintenance. The DoD has chosen to limit outsourcing to functions not considered to be "core" competencies. (Stafford, 1996).

The DSB Task Force found that the private sector outsourcing process is comprised of three phases: the presolicitation phase, the solicitation phase, and the implementation phase. The average time to complete the entire outsourcing process is 14.6 months, with the shortest time about six months and the longest time about 24 months. The timeline is relatively short when compared to the DoD average procurement process of 24 to 30 months for contract award with additional time for implementation.

The Task Force identified several critical success factors to the private sector outsourcing initiative. The lessons learned from the private sector include:

Senior executive leadership: Successful outsourcing actions require the active involvement of senior executive leadership. The leadership must be sustained through development of the request for proposal (RFP), selection of the vendor, and implementation of the transition plan. Delegating outsourcing to middle managers who may be affected by the outsourcing action was not effective as they typically resist the change.

Outsource broad processes: Outsourcing of broad functional areas rather than single functions or a group of tasks leads to greater synergy and decreased contract management and oversight. Contracting an entire functional area also leads to greater control and accountability.

View benefits from life cycle: Benefits accrue over the life of the contract. Improvement may not occur immediately after the function is outsourced and it may require a considerable effort for the vendor to reengineer the process. Evaluation should not occur after the first year, but at the conclusion of the project and with a lifecycle perspective.

Small, highly trained oversight cadre: Successful outsourcing firms tend to use a small oversight and contract administration staff to interact with the vendor on a daily basis. The oversight and administration personnel are generally collocated with the vendor.

Establish a partnership between outsourcer and vendor: The outsourcing firm should cultivate a collaborative relationship with the vendor. Emphasis should be given to identifying and resolving problems as early as possible.

Performance specification and best value solicitations: Outsourcing yields greater benefits when the service provider is encouraged to apply improved technology and better business practices to reengineer the support function. Solicitations should use performance standards to encourage providers to apply innovative solutions. Selection criteria should be based on best value.

Contract scope mutual agreement: The primary source of problems in outsourcing is disagreement between parties on the scope of work. The client and the vendor must thoroughly discuss the statement of work to come to a true meeting of the minds. Outsourcing contracts can be extremely complicated and firms with little outsourcing experience should hire specialists or consultants.

Performance incentives: Performance incentives are an important tool to align the interests of the vendor with the client. Incentives are typically used to reward the vendor for reducing costs and improving service quality or responsiveness.

Long-term contracts: The standard length of large service contracts in the private sector is five to ten years and rarely less than three. The benefits from outsourcing accrue in the long run after process reengineering.

Market forces: Outsourcing firms utilize market forces by applying competitive pressures to the marketplace for support functions traditionally performed by inhouse monopolies. Service contracts are awarded through a competitive process. The contracts generally include performance incentives to encourage cost reductions and service improvements.

Continuous communications: Successful firms keep the workforce well informed throughout the outsourcing process. Unions are engaged early and given an opportunity to have input into the outsourcing process.

Reemployment: The vendor must typically employ large numbers of workers in a short period after contract award. One solution is to require the vendor to give "first right of refusal" to the displaced workforce.

Transitional assistance: Most companies with extensive outsourcing experience provide transitional assistance to those affected employees. Assistance includes opportunity to seek employment elsewhere in the company; severance pay based on length of service; early retirement to qualified employees; retraining; and outplacement services.

3. Public Sector Experience

Many State and local governments have adopted a strategy of public-private competition and outsourcing to reduce costs and improve service delivery. Success stories include Kansas City, Minneapolis, Philadelphia, Phoenix, and Indianapolis.

The City of Indianapolis for example has conducted 60 public-private competitions for several municipal functions including: airport operations and maintenance, information technology (IT), facility maintenance and management, fleet maintenance and management, road maintenance, solid waste collection and wastewater treatment. About half of the competitions are won by private sector vendors. From 1983-

92, the city budget was increasing by about \$20 million annually. By 1996 the budget has declined for four straight years and is now \$90 million below the trend.

The Task Force found that DoD devoted about 850,000 full time equivalents (FTE) to commercial-type activities (CA) in 1994. Of the total, about 210,000 FTEs or only about one quarter was performed by outside contractors. The 640,000 inhouse FTEs are split about half between military and civilian personnel. The FTEs were involved in over 150 different functions in the following categories:

- Social services.
- Base maintenance.
- Data processing.
- Health services.
- RDT&E support.
- Manufacturing and fabrication.
- Intermediate maintenance.
- Installation services.
- Maintenance of real property.
- Depot maintenance.
- Education and Training.
- Other non-manufacturing.

The Task Force stated view was that most support functions involving CA should be performed by outside vendors, including those activities currently being performed by military personnel. Most DoD organizations have not moved aggressively to transfer functions to the private sector. Nevertheless, DoD can point to several successful examples of outsourcing.

There have been some elements of successful outsourcing within DoD. Examples include the Defense Logistics Agency (DLA) efforts to reduce wholesale inventories through a strategy of direct vendor delivery (DVD) of consumable materials. With the DVD process, a private sector vendor is contracted to deliver consumables of all types, from pharmaceuticals to office supplies, directly to the end user. The DLA has been able to reduce its inventory of over \$10 billion and eliminate warehouse and distribution facilities while significantly reducing delivery times. The DVD process has been further streamlined by prime vendor contracts. With a prime vendor contract, the end user orders directly from the vendor and the item is delivered usually within 24 hours.

Contractor personnel have provided many support services to military units in-theater during every military deployment since the Vietnam conflict. The services provided include a wide range of logistics, logistic support, administrative, and other support services. The contractor support has been both responsive and effective and no firm has refused to provide in-theater support during a military contingency. (Camm, 1995).

Outsourcing actions within Federal agencies is governed by Office of Management and Budget (OMB) Circular A-76 that requires the outsourcing activity to

conduct competition between the inhouse public service provider and private sector vendors. During the 1978-94 period, the DoD military services conducted 2,138 A-76 actions. The public-private competitions resulted in about \$1.5 billion annual savings, an average of 31 percent across all services. (Tighe, 1995). Outside vendors won about 52 percent of the competitions accounting for approximately 64 percent of the total workload and 78 percent (\$1.2 billion) of the total savings.

The Center for Naval Analysis (CNA) analyzed the results of more than 800 A-76 competitions within the Navy and found that savings averaged over 30 percent overall, and nearly 40 percent when the studies were won by outside vendors. In contrast, the savings totaled only about 20 percent when the inhouse workforce was retained even with 54 percent being won by the inhouse entity. (Marcus, 1993). The CNA analysis indicated the Navy studies focused on very narrow functional areas involving few government employees. About half of the studies involved fewer than 10 employees, while less than 10 percent involved more than 55 workers. The data also indicated that savings were highest when private vendors took over functions traditionally performed by military personnel. In these cases the savings averaged nearly 50 percent of total cost. The study also found that transferring workload to outside vendors resulted in no significant quality problems.

The Task Force members were in strong agreement that DoD should consolidate responsibility for all base support functions in a single contract for each installation. The approach would transfer responsibility to a qualified service contractor for providing integrated facility management services. The proposal would not only reduce service

costs from the traditional "stovepipe" method, but also would reduce oversight costs and raise the visibility of contractor performance to senior management levels.

4. Primary Impediments

The DSB Task Force identified several major impediments to DoD implementation of an aggressive outsourcing strategy. The impediments include statutory restrictions and congressional micromanagement; a time consuming and complicated procurement process; policies within DoD to maintain certain "core" capabilities; and a fundamental DoD culture of resistance to change. In addition to these impediments, a previous statute provided base commanders with the sole authority to commission A-76 cost studies at their installations. The statute contributed significantly to the dramatic decline in the number of A-76 studies completed in recent years.

Acquisition reform has not yet addressed the lack of adequate expertise in service contracting possessed by DoD contracting officers. For this reason, service contracts in DoD tend to include detailed specifications on how to perform the service, vice performance specifications that encourage reengineering of processes to improve performance and lower costs. The procurement process in DoD fosters a formal and arms length, and sometimes adversarial relationship between vendors and contract oversight personnel. Private sector experience with complex service contracts suggests a more collaborative approach result in more effective contract management and vendor relations.

The procurement timeline is excessive for DoD service contracts, limiting the ability of the department to aggressively pursue outsourcing solutions. The average A-76 study takes at least 24 months for a single function, and exceeds 48 months for a complex multiple function.

Cost accounting systems in the federal sector are designed to support the government budget process and congressional reporting requirements. The accounting systems are inadequate when used to measure and control the true costs of performing a business function. The basic premise of competition is undermined by not being able to determine true costs when competing with the private sector. Accurate cost accounting information, including proper allocation of indirect and overhead costs, could be achieved by augmenting the existing process with Activity Based Costing (ABC) methods. In the private sector, ABC has become a widely used and highly effective tool for understanding and managing costs.

The Task Force favors shifting more depot level maintenance and repair workload to the private sector. Decisions on repair work should be based solely on capability and reliability. Responsiveness and assurance should guide workload allocation decisions vice ownership of the maintenance organization. Core capabilities for some specialized workload (e.g. deactivation of nuclear propulsion systems) needs to be maintained inhouse, however the Task Force believes the residual capability should be significantly reduced from the present infrastructure.

A history of remarkable achievement within DoD has resulted in an entrenched culture that is resistant to change. In addition, there are few incentives for the military

services to pursue an aggressive outsourcing program. Installation Commanders are not evaluated on their effectiveness in outsourcing, and feel obligated to protect the job security of their staff. The DoD culture requires the Installation Commander to focus on military readiness, placing emphasis on the need for reliable and effective support. This traditional orientation translates into a very strong preference for inhouse support organizations. Skepticism prevails even when it becomes apparent that outsourcing can result in more effective and efficient support.

5. Proposed Strategy

The DSB Task Force urged DoD to establish a goal of shifting \$7 to \$12 billion in outsourcing savings to modernization accounts by FY 2002. The task force based these estimates for savings on the assumption that one half to two thirds of the 640,000 FTEs performing CA work could be transferred to the private sector by FY2002. With a fully loaded man-year rate estimated at \$70,000, and assuming 30 percent savings as noted by CNA, (Tighe, 1995) on only half of the available FTEs, a total of about \$7 billion in savings would be realized. The Task Force believes that with a more aggressive outsourcing plan, DoD could achieve savings of 40 percent on two thirds of the available FTEs, realizing about \$12 billion in savings.

An aggressive strategy would be required to achieve the identified potential savings. Critical elements of the strategy would need to include the following:

Change presumption: DoD must abandon the more costly bias in favor of inhouse support. All support functions that can be performed effectively by the private sector should be outsourced.

Reduce reliance on A-76: The Task force believes the A-76 process is a flawed procedure and discourages outsourcing. DoD should use business case analysis, not public-private competition as the primary outsourcing vehicle. The decision should be made to get out of the business of some support functions. Outsourcing should be extended to include military billets to maximize savings potential.

Broad functions: The Department should focus outsourcing efforts on more large and complex business areas to provide vendors with a greater opportunity to apply innovative technologies and to maximize savings.

Reform A-76: DoD should continue to expedite the competitive process and seek to make private-public competitions more equitable.

Eliminate Impediments: Priority attention should be given to removal of institutional and statutory impediments to the outsourcing initiative.

Develop implementation plan: A detailed implementation plan with aggressive goals and milestones should be developed. Senior DoD managers should be held accountable to achieving outsourcing objectives.

6. Recommendations

The DSB Task Force report provided the following recommendations to DoD. (DSB, 1997).

a. Policy

- A policy statement should be issued by the Secretary of Defense (SecDef) reiterating that the private sector is the preferred provider of commercial activity (CA) support services.
- The Secretary should stress that all non-combat support services must be considered for outsourcing except those that are inherently governmental (IHG) and services for which no adequate private sector capability exists.
- DoD officials should ensure military services retain savings from outsourcing for modernization.
- Legislation necessary to remove impediments and support an aggressive outsourcing strategy should be made a top priority.

b. Leadership

- Senior DoD leadership must persuade the institution that it is committed to implementing an aggressive outsourcing strategy.
- Strong top-down support for a fundamental shift in DoD business practices to overcome mid-level resistance to change.
- Senior leadership must designate a champion for outsourcing at the Assistant Secretary level or higher.

- DoD and Service components must establish and communicate clear expectations and milestones for subordinates. Senior managers must be held accountable for meeting goals.
- DoD leadership must work with the Congress to eliminate statutory impediments to aggressive outsourcing.

c. A-76 Process

- Take full advantage of the A-76 waiver authority to avoid formal public-private competitions. Make the decision to "get out of the business" when necessary.
- Continue to seek revision to the A-76 process to reduce complexity, improve timelines, and be advisory vice mandatory. Model the outsourcing process after the private sector's make versus buy decision making-process.
- Identify and employ "best practices" to expedite the A-76 process.
- Employ ABC analyses of DoD activities involved in public-private competitive sourcing to ensure proper identification and allocation of all overhead and indirect costs.

d. Contracting

- Expand the DoD acquisition reform initiative to include service contracting improvements. Deploy a "tiger team" to develop near-term plan.
- Service contracts should employ output oriented performance incentives to align the interests of both parties.
- Develop a collaborative relationship with private service providers. Minimize contractor oversight personnel.
- Service contracts should be long term partnerships, but have effective cancellation clauses.

e. Personnel

- Openly communicate intentions early and frequently.
- Seek early involvement of employee and labor organizations.
- Minimize involuntary separation by downsizing through attrition where possible.
- Provide retraining, outplacement, and severance packages consistent with industry practices.
- DoD leadership must be focused on the transition process and ensure displaced staff are treated fairly.

f. Logistics

- Base depot-level repair decisions on capability, reliability, and responsiveness.
- Eliminate or redefine "core" logistics concepts to allow reliable contractors to perform.
- Logistic support for new systems should be contractor provided.
- Continue the ban on public-private competitions for depot work and work with congress to eliminate the 60/40 rule.
- Outsource weapon system sustaining engineering work.
- Avoid privatization in place approach unless it is the only practical solution and then ensure commercial work can be brought in.
- Expand prime vendor and direct vendor delivery initiatives to service supply systems.

g. Defense Agencies

- Outsource Defense Commissary Agency (DeCA) operations, continental United States (CONUS) Defense Information Systems Agency (DISA), CONUS defense finance and accounting (DFAS) accounting and payroll operations, transportation of household goods (HHG) and relocation services.

- Expand training and education outsourcing initiative. Focus on elimination of high cost military FTEs.
- Expand outsourcing initiative for medical services.
- Allow services to compete Defense Business Operating Fund (DBOF) services against the private sector.

h. Installation Support

- The Task force recommends transferring responsibility for most base support activities to private contractors.
- Adopt a new framework for installation support based on positive experience in the private sector with integrated facility management (IFM).
- Establish a pilot program to outsource all support functions to a single contractor at two or more major installations in each service by the end of FY 1997. The contract should be best value competition and output oriented with performance incentives for five years.
- Gradually privatize all military housing and concurrently increase housing allowances to offset the burden of living on the economy.

i. Other Contracting Opportunities

- Use business case analyses approach to identify those services that could be transferred immediately to the private sector at lower costs with superior quality.
- Senior DoD leadership should make the necessary top-down policy decision to reengineer operations and "get out of the business" of performing support functions that are performed by the private sector more efficiently.

E. QUADRENNIAL DEFENSE REVIEW

The Quadrennial Defense Review (QDR) was established by the Department of Defense Fiscal Year 1997 Authorization Act. The law contains a subsection entitled "Military Force Structure Review Act of 1996," originally sponsored as an amendment by Senator Lieberman (D-Conn.), establishing the QDR process to examine DoD strategy, force structure, modernization and infrastructure once every four years. Congress, dissatisfied with the slow pace of reform in the DoD by the executive branch, hoped to accelerate the restructuring of the department with the QDR.

1. Modernization

The focus of the QDR was to build a solid financial foundation that would support the future warfighting capabilities described by Joint Vision 2010. One important assumption made by the QDR was that national defense authorizations would remain

constant at 1997 levels of about \$250 billion. The assumption was rather optimistic given the deficit reduction targets at the time. However, by projecting a relatively stable budget, the QDR could concentrate on internal reforms to support the modernization of weapons systems.

Modernization had been slowed in the years following the Cold War as procurement accounts were disproportionately reduced and the funds reprogrammed to other support accounts. The decision to reduce the procurement accounts was a calculated risk supporting the defense drawdown initiated during the Bush administration. The risk seemed prudent as DoD had procured large numbers of modern weapons during the early 1980's and was retiring older weapon systems during the drawdown. However, the drawdown was now effectively over and the dividend from reducing procurement was exhausted. The QDR declared the "procurement holiday" must end. Maintaining technical superiority would require increasing the procurement accounts from \$42.6 billion to roughly \$60 billion by FY-2001. (BENS, 1997).

2. Force Structure

Another significant assumption made by the QDR was to maintain the status quo threat scenario assumed earlier by the BUR. Military force structure would continue to be based on the requirement to support two major regional conflicts (MRC) almost simultaneously. Maintaining the two MRC threat scenario would result in very little military service department force structure change.

The Army would maintain 10 active duty divisions. Army Reserve and National Guard would be reduced by 45,000, civilians would be reduced by 33,700, and active duty personnel reduced by 15,000 through deactivation, consolidation, and realignment of headquarters and facilities.

The Navy would maintain 12 carrier battle groups and 12 amphibious assault ready groups. Surface combatants would be reduced from 128 to 116 while the fast-attack submarine fleet would be reduced from 73 to 50 boats. Personnel reductions would include 18,000 active duty, 8400 civilians and 4100 reservists.

The Air Force would maintain 20 fighter wings but transfer one of the 13 active wings to the reserves. Bombers would be reduced from 202 to 187. These reductions and some additional realignment would result in personnel reductions of 27,000 active duty, 700 reserves and 18,300 civilians.

The Marine Corps would maintain all three Marine Expeditionary Forces (MEF). Slight personnel reductions through realignment would result in 1,800 active duty, 400 civilians and 4,200 reserves being cut.

Total DoD personnel reductions projected by the QDR were about 60,000 (4.2 percent) active duty, 55,000 (6.2 percent) reservists, and 80,000 (11.1 percent) civilians. Of the 140,000 total active duty and civilian personnel reductions, 109,000 (78 percent) were planned to come from infrastructure support reductions. Infrastructure support was clearly targeted as the modernization bill payer. A significant portion of the reductions was expected from two new rounds of base closure and realignment (BRAC). The new BRAC actions have yet to be authorized by congress.

3. Infrastructure

Infrastructure support was defined by the QDR as the organizations and activities conducted by installations for the operating forces, training programs for military personnel, logistics support, central personnel services, and headquarters functions. The QDR identified that 48 percent of the total military and civilian personnel employed by DoD are engaged in infrastructure support functions. In addition, when medical services, science and technology programs, and central command, control and communications functions are included the number expands to 61 percent of total DoD personnel.

The QDR placed considerable attention on operation of the defense infrastructure. Much of the emphasis was due to the similarities between DoD infrastructure and private sector business practices. Business operations in the private sector have undergone transformational change in recent times. Lessons learned from the private sector are expected to be directly transferable to DoD infrastructure operations.

One QDR initiative called for improving the efficiency and performance of DoD support activities by adopting innovative management and business practices from the private sector. Included in the innovative initiatives was "reengineering" or "reinventing" support functions. The report characterized reengineering as streamlining, reorganizing, downsizing, consolidating, computerizing, and commercializing operations.

Another example cited as a critical part of reengineering is outsourcing of non-warfighting support functions. Outsourcing was presented in terms of competition between the private and public sectors for providing support functions. Outsourcing is

expected to provide tighter focus on core tasks, better service quality, more responsiveness and agility, better access to new technologies, and lower costs.

The QDR also identified significant remaining excess base structure, enough to support two additional BRAC rounds. The active duty end strength would be reduced by 36 percent by FY 2003, yet domestic facilities would be reduced by only 21 percent without additional BRAC rounds. The report acknowledged that costs are significant up-front, however long term savings are substantial. The recommendation was that future BRAC should also include laboratories and test ranges that support research, test, and evaluation in addition to bases.

F. DEFENSE REFORM INITIATIVE

The QDR examined the national security threats, risks, and opportunities facing the country today through 2015. A new national defense strategy was developed from this analysis. Implementing the strategy requires a balance between the demands of present postures with the imperative to invest in the future. The balance between requirements can be achieved only if resources are reallocated from overhead and support functions to the fighting forces. (Cohen, 1997)

The conceptual framework for how our forces will fight in the future is described in Joint vision 2010 as full spectrum dominance. This "Revolution in Military Affairs" (RMA) promises to enable our forces to attack throughout the battlefield with great precision and few munitions, and to better protect themselves. The transformation of the

forces is achievable, but dependent on our ability to shift resources from overhead and support functions by bringing about a "Revolution in Business Affairs" (RBA).

The Defense Reform Initiative (DRI) strives to achieve the RBA. The reforms identified have been guided by the following principles:

- Focus the enterprise on a unifying vision.
- Commit the leadership team to change.
- Focus on core competencies.
- Streamline organizations for agility.
- Invest in people.
- Exploit information technology.
- Breakdown barriers between organizations.

The DRI applies the guiding principles to define initiatives in the following four areas: (GAO/NSIAD-99-87, 1999).

Reengineer: Adopt modern business practices to achieve world-class standards of performance.

Consolidate: Streamline organizations to remove redundancy and maximize synergy.

Compete: Apply market mechanisms to improve quality, reduce costs, and respond to customer needs.

Eliminate: reduce excess support structures to free resources and focus on core competencies.

1. Reengineer By Adopting Best Business Practices

The DoD is adopting many of the lessons learned by the private sector over the past decade. These best business and management practices have made American business a world leader and increased productivity to an all time high. Many of the proposed business process reengineering initiatives must overcome significant challenges if they are to be implemented in a timely, efficient, and effective manner. (GAO/T-NSIAD/AIMD-98-122, 1998).

a. Electronic Business Operations

Electronic technologies including the Internet and the World Wide Web will allow DoD to eliminate a significant amount of paperwork processing. DoD business processes will become more efficient by reducing the amount of paper processed. Use of electronic funds transfer (EFT) for contract payment will also allow DoD to realize gains in efficiency.

Considerable savings in both cost and delivery time is being achieved by the use of the government-wide purchase card. The government purchase card is equivalent to a Visa commercial credit card and is widely accepted. By using the government purchase card for transactions between organizations, inventory levels can also be reduced.

Electronic commerce will also be expanded to allow Internet direct purchases. The efficiency of small item purchases will be improved dramatically by allowing the end user to make the transaction directly. The DoD is establishing electronic shopping malls to support one stop shopping that will also utilize the government purchase card for payment.

By making technical data available electronically, DoD is moving towards paper-free weapons system support. Many other publications, reports and directives are being made available either electronically or by CD-ROM supporting the reduction of paper and increasing efficiency throughout the department.

b. Prime Vendor Contracting

In the past, the procurement strategy within DoD was to procure huge stocks of material and commodities. The items would be stored in DoD warehouses and invariably not all would be used by the expiration dates. Considerable costs were incurred by DoD for initial procurement, storage, handling, and spoilage resulting in significant inefficiencies. Today a different concept called prime vendor delivery is being used to improve both procurement efficiency and delivery time. Prime vendor is based on a negotiated contract with a single vendor who supplies to all DoD customers within a geographical area. The vendor is responsible for all distribution and warehousing requirements and delivery to the end user. This process has greatly improved delivery time while reducing overall costs.

c. Consolidating Logistics and Transportation

Just in time logistics is revolutionizing the DoD just as it did to American business. Delivery of needed material to forward-deployed warfighters is of critical concern. The DoD has committed to provide total visibility of all equipment, supplies, and spare parts by the use of modern inventory management systems. A new transportation management system is expected to enhance visibility and permit greater efficiency in transportation. (GAO/NSIAD-00-7, 1999) These initiatives will build confidence in the deployed force that smaller inventories will meet critical needs.

d. Travel Reengineering

The system will be revamped and the old rules simplified. The time required to process a travel claim has been reduced by 65 percent. The new paperless process is expected save hundreds of millions of dollars annually.

e. Household Goods Transportation

Over 800,000 household moves annually are paid for by DoD, more than any corporation in the country. Of all the moves, 25 percent end up with damage claims filed as compared to about 10 percent in the private sector. The poor performance is a direct result of our "lowest bidder" contracting system. We must do better for our people. Two initiatives will help achieve improvement goals.

First, reimbursement rates for military members that chose the Do It Yourself (DITY) option will be raised from 80 percent of government costs to 95 percent.

Secondly, service members will be allowed to select from a list of local carriers instead of being assigned a carrier based on a rotating list.

2. Consolidate Pentagon Organization

In alignment with reengineering efforts, the headquarters element should be focused on corporate level tasks. Consequently, corporate level organizations within the Office of the Secretary of Defense (OSD) and the service Headquarters must be reduced and flattened (McInerney, 1998). In addition, Congress directed DoD to reduce all headquarters activities 25 percent from FY 1997 levels by the end of FY 2002. (GAO/NSIAD-99-45, 1999). The following DRI goals will allow the organizations to focus on core activities:

- Reduce OSD by 33 percent from FY 1996 levels.
- Reduce DoD field activities and operating organizations reporting to OSD by 36 percent.
- Reduce the Joint Staff and associated personnel by 29 percent by the end of FY 2003.
- Reduce Defense Agency personnel by 21 percent over five years.
- Reduce Headquarters elements of the Military Departments and major commands by 10 percent by the end of FY 2003
- Reduce the Headquarters of Combatant Commands (CINC's) by 7 percent by the end of FY 2003.

3. Streamlining Through Competition

Competition forces organizations to improve quality, reduce costs, and focus on customer requirements. American corporations are world leaders in cost performance, innovation and technology development because of the competition of global markets. Much of the support services performed within DoD are identical to those in the private sector.

Competition between private and public sectors is not new. The DoD has conducted many competitions in the past that generally resulted in savings of 20 percent or more. Many state and local governments have also learned that competition improves quality and reduces costs. The intent is not to replace the government worker with private sector contractors, just to obtain the best service at the best price. The Future Year Defense Plan (FYDP) projects savings from A-76 competitions as \$6.2 billion between FY 1997 and FY 2003. (GAO/NSIAD-99-66, 1999).

a. Competition for Commercial Activities Using A-76

Competitions for commercial activity (CA) work between the private and public sector are conducted in accordance with Office of Management and Budget (OMB) circular A-76. To ensure competitions are conducted fairly, A-76 provides procedures to compare the inhouse most efficient organization (MEO) with private sector bids.

Between 1979 and 1994 DoD conducted over 2000 competitions under the A-76 requirements. About half of the competitions were won by the private sector and

half by the inhouse workforces. Regardless of who won, annual operating costs were reduced by about 31 percent for a cumulative total savings of over \$1.5 billion a year. Conducting competition studies may require the use of support contractors, as existing inhouse expertise is less than in the past. (GAO/NSIAD-99-46, 1999)

The DoD intends to significantly increase the number of functions competed under A-76. Over the next five years, approximately 150,000 FTE's will be competed in a variety of commercial activities. Savings are expected to be a sustained \$2.5 billion after the competitions are completed.

Classification of commercial activities must be improved and standardized. The DoD will review all functions performed by military and civilian personnel and identify which are inherently governmental (IHG) and which are commercial (CA) in nature. Functional reviews will likely lead to additional FTE competitions beyond what is currently planned.

b. Competition for Depot Maintenance

Competitions generate positive incentives for cost reductions. The DoD will always need some amount of organic depot repair capability to meet core warfighting requirements. A careful case by case evaluation should be conducted for depot work available for competition.

Depot maintenance work is largely excluded from A-76 competitions by statute. The DoD will continue to pursue public-private competitions to the extent allowable by law. Competitions for depot work can save the taxpayers millions of dollars.

4. Eliminating Unneeded Infrastructure

An important attribute contributing in the rise of American business to world leadership has been their efforts to divest of unneeded and out of date infrastructure. The DoD is encumbered with excess facilities. These facilities drain resources that could otherwise be spent on modernization. An integral part of the reform strategy is to eliminate unneeded infrastructure.

a. Base Closure

Infrastructure reductions have lagged behind force structure drawdowns. The force structure will have reduced by 36 percent by the end of FY 2003 yet domestic base structure will have been reduced by only 21 percent. Even after four rounds of Base Closure and Realignment (BRAC) have been completed, excess base structure consumes significant resources for annual operation and maintenance that could be used for modernization. (GAO/T-NSIAD-98-115, 1998)

The previous four rounds of BRAC will yield sustained annual savings of \$5.5 billion beginning in FY 2001. The DoD invested \$23 billion to close or realign 152 major and 235 smaller installations. Yet, DoD still operates facilities that it no longer needs and cannot afford. (GAO/NSIAD-99-36, 1998)

The QDR found that there are enough excess facilities to warrant two additional rounds of BRAC. The DoD will seek congressional approval for these two rounds.

b. Consolidation, Restructuring, and Regionalization

It is more costly to operate several smaller facilities that could be consolidated into a few larger ones. Several prime candidates for consolidation include the Defense Information System Agency (DISA), Defense Finance and Accounting Service (DFAS), laboratories and test and evaluation facilities.

Areas of high installation concentration will consider regional consolidation opportunities. Sharing infrastructure across commands, bases and services can generate significant savings. (GAO/HR-97-7, 1997).

Demolition of excess buildings that are no longer needed is an essential element of the reduction strategy. The DoD has already identified 8,000 and 50 million square feet of excess facilities that will be demolished.

c. Revitalizing Housing and Utilities with Private Sector Capital

New tools have been authorized by Congress that allows leveraging private sector capital for military family housing and base utility systems. The DoD can now convey title to military housing and utility systems to the private sector who can then invest their own resources to provide better services.

About two thirds of all military families already reside in the private sector housing at a cost of about \$8 billion annually. (GAO/NSIAD-00-71, 2000). The other one third lives in 300,000 government owned housing units. About 200,000 of these units are below acceptable standards because of years of neglect. With the traditional methods of repair and replacement, and the projected housing budgets, it

would take 30 years and \$20 billion to bring these housing units up to standards. With the new authorities, DoD will seek to eliminate all inadequate housing by 2010, much more quickly than otherwise possible.

Utility systems on DoD installations provide water, electricity, steam, and sewer necessary for installation operation. Many of these systems are old and in need of repair. The funding required to repair these systems far exceeds what is available. The DoD will seek to transfer ownership of these systems to local utilities and other entities that do have the resources and the expertise to operate the systems.

The procurement of energy commodities is also targeted for improvement. Energy is a regional commodity. Because of different service channels, installations in the same region but in different service channels have not been able to consolidate procurements in the past. The DoD will consolidate energy purchase contracts under the Defense Energy Support Center (DESC) to maximize savings.

G. NATIONAL DEFENSE PANEL

The Military force Structure Act of 1996 required the convening of a National Defense Panel (NDP) to report on the significant issues facing DoD as it transitions into the 21st century. The panel drew from experts on defense and national security from within the DoD, other government agencies and the private sector. The panel evaluated the future operational environment from 2010 to 2020 against the force capabilities necessary to meet defense challenges of the future. (Odeen, 1997).

The NDP viewed fundamental reform of the DoD support infrastructure as a critical element necessary to support a successful transformation strategy for 2010-2020. The report noted that DoD infrastructure of today was unaffordable and that meaningful reform was not possible unless DoD embraced a more effective business-like approach. Excessive costs to maintain the expansive Cold War era infrastructure divert resources from modernization. The DoD expends 60 percent of their total budget authority for infrastructure support. (Ackerman, 1997). Transformational change can only be achieved if DoD and the military departments are willing to consider dramatic changes to leverage innovative business practices and technology. The NDP believes a new paradigm is needed for infrastructure management that contains the following elements:

Cost visibility and Accuracy: Cost information is imperative to support improvement in resource allocation. Decision-makers must have systems that make costs visible. Financial systems that accurately reflect costs and supports management visibility for improvement decisions should become a priority. One tool for improving cost accounting is ABC. Modeling by ABC methods is gaining acceptance for cost determination in A-76 competition studies. (GAO/NSIAD-99-152, 1999).

Positive Incentives: The DoD must ensure that part of the savings realized from streamlining efforts is retained by the local organization for its own use. Projected savings should not be removed before improvements are fully implemented. The panel also recommended that DoD accelerate deployment of new financial management systems with strong ABC capabilities.

Choice and Competition: The ability to develop innovative solutions to customers needs is enhanced by competition and choice. Competitively sourcing support services is essential to force improved service quality and lower costs.

Resource flexibility: The flexibility of DoD management is severely restricted by the inability to shift funds between accounts because of "color of Money" restrictions. The Planning, Programming, and Budgeting System (PPBS) has evolved into a rigid and endless process that is detrimental to strategic planning and effective business management. Increased flexibility in resource allocation would encourage innovation and process improvement. (BENS, 2000).

Civil and Military Integration: Local communities should become the preferred providers of support services. The DoD should revise the long-standing policy of military base self-sufficiency and integrate into the local community. The NDP recommended DoD reconsider the traditional and paternalistic concept of a military base providing on-base housing, health care, entertainment, education, commissaries, and other support functions. Military personnel should receive additional compensation rather than on-base support services.

Installation and Facility Consolidation: Excess military base infrastructure needs to be reduced. The panel strongly urged both the Congress and DoD to conduct additional Base Closure and Realignment (BRAC) actions. In addition, the panel noted that DoD maintains significant duplication of facility capability across military departments and recommended that DoD move toward joint installations.

H. DON REVOLUTION OF BUSINESS AFFAIRS

Over the past decade, the private sector has successfully transformed their business practices in response to increasing global competition. The Department of the Navy (DoN) views these changes as revolutionary and hopes to capture some of the same innovation to dramatically improve Navy business functions that are very similar. The DoN has termed their change initiative the "Revolution in Business Affairs" (RBA). According to a report from the Naval Studies Board (NSB), DoN expects the RBA will achieve between \$3.5 and \$5.0 billion in annual savings for modernization. (NSB, 1998). The Secretary of the Navy (SecNav), along with the Commandant of the Marine Corps (CMC), and the Chief of Naval Operations, (CNO) have provided the department with a business vision and goals. (Danzig, 1998). The DoN leadership believes business process improvements will lead to resource savings that can be applied to operational needs and requirements. The strategic business vision is:

The department of the Navy will continue to provide the dominant global naval force and develop future capabilities to safeguard the nation. The department will recruit, engage, and retain the best people in military and civilian service; deliver recognizable values for every dollar spent; and create a business environment focused on teamwork and outcomes.

The strategic business goals include:

- Foster continued conceptual, technological, and operational superiority.

Develop business programs to leveraging innovative technology and

operational concepts. Align acquisition processes to take advantage of information and technology.

- Recruit, engage, and retain the best people, both military and civilian. Recognize the value of people and develop a professional staff. Increase efficiency and reduce workload. Optimize and balance people resource training, recruiting, and rewarding. Increase personnel management flexibility. Support learning and professional development.
- Deliver recognizable value for every dollar spent. Develop decision support tools to enable informed decision making. Improve decision support systems visibility, accountability and connectivity.
- Create a business environment focused on teamwork and outcomes. Reduce bureaucracy by moving beyond "stovepipes" to integrated organizations. Adopt best business practices for providing services.

I. REFORM INITIATIVES IMPACTING INSTALLATIONS

The DRI is by far the major reform initiative that will have the greatest impact the installations are operated in the DoD. Each of the four focus areas of the DRI will change the way business functions are executed at installations.

Reengineering of DoD wide business processes by adopting modern business practices that will achieve world-class standards of performance. Use of electronic funds transfer (EFT) for contract payment, service contract awards, and the use of the government-wide purchase card are already being implemented at the installation level.

In addition, reengineering of installation specific functions will also lead to improved efficiency and effectiveness.

Installations will also be actively involved in streamlining organizations by consolidating to remove redundancy and maximize synergy. Many of the other initiatives will cause a need for restructuring installation organizations.

Competitions for commercial activity (CA) work between the private and public sector conducted in accordance with Office of Management and Budget (OMB) circular A-76 will be the primary method of reform at installations. The DoD intends to significantly increase the number of functions competed under A-76. Most CA functions are conducted at installations. Over the next five years, approximately 150,000 FTE's will be competed in a variety of commercial activities.

An important attribute contributing in the rise of American business to world leadership has been their efforts to divest of unneeded and out of date infrastructure. The DoD is encumbered with excess facilities. These facilities drain resources that could otherwise be spent on modernization. An integral component of the installation reform strategy will be to consolidate infrastructure use in high concentration areas and to eliminate unneeded infrastructure when possible.

The most predominate tools of the RBA applied to installations will be competitive sourcing, regionalization, privatization, and business process reengineering. Each of these initiatives will have a significant impact on installation operations over the next several years.

1. Competitive Sourcing

If extensive savings are to be achieved, DoD must abandon its traditional reliance on in-house support organizations and support a new paradigm that capitalizes on the efficiency and creativity of the private sector. Competitions for commercial activity (CA) work between the private and public sector conducted in accordance with Office of Management and Budget (OMB) circular A-76 will be the primary means of business reform at installations. To ensure competitions are conducted fairly, A-76 provides procedures to compare the inhouse most efficient organization (MEO) with private sector bids. Competitive sourcing of broad functional areas rather than single functions or a group of tasks leads to greater synergy and decreased contract management and oversight. Contracting an entire functional area also leads to greater control and accountability.

Competitive sourcing is expected to provide tighter focus on core tasks, better service quality, more responsiveness and agility, better access to new technologies, and lower costs. Regardless of who wins the competition, annual operating costs are expected to be reduced by about 30 percent.

The DoD intends to significantly increase the number of functions competed under A-76. Over the next few years, approximately 150,000 FTE's will be competed in a variety of commercial activities. Savings are expected to be a sustained \$2.5 billion after the competitions are completed.

Classification of commercial activities must be improved and standardized. The DoD will review all functions performed by military and civilian personnel and identify which are inherently governmental (IHG) and which are commercial (CA) in nature. Functional reviews will likely lead to additional FTE competitions beyond what is currently planned.

2. Regionalization

The DoD infrastructure is unaffordable and meaningful reform not possible unless DoD embraces a more effective business-like approach. Excessive costs to maintain the expansive Cold War era infrastructure divert resources from modernization. The NDP noted that DoD maintains significant duplication of facility capability across military departments and recommended that DoD move toward joint installations. Transformational change can only be achieved if DoD and the military departments are willing to consider dramatic changes to leverage innovative business practices and technology a new paradigm is needed for infrastructure management. It is more costly to operate several smaller facilities that could be consolidated into a few larger ones. Areas of high installation concentration will consider regional consolidation opportunities. Sharing infrastructure across commands, bases and services can generate significant savings.

3. Privatization

Privatization initiatives for family housing will impact installations. New tools have been authorized by Congress that allows leveraging private sector capital for military family housing and base utility systems. The DoD can now convey title or "privatize" government owned military housing and utility systems to the private sector. The new titleholder can then invest their own resources, and leverage capital through loans to improve the facilities and provide better services.

One third of military families live in 300,000 government owned housing units. About 200,000 of these units are below acceptable standards because of years of maintenance neglect. With the traditional methods of repair and replacement, and the projected housing budgets, it would take 30 years and \$20 billion to bring these housing units up to standards. With the new authorities, DoD will seek to eliminate all inadequate housing by 2010, much more quickly than otherwise possible.

Utility systems on DoD installations provide water, electricity, steam, and sewer necessary for installation operation. Many of these systems are old and in need of repair. The funding required to repair these systems far exceeds what is available. The DoD will seek to transfer ownership of these systems to local utilities and other entities that do have the resources and the expertise to operate the systems.

4. Business Process Reengineering

One QDR initiative called for improving the efficiency and performance of DoD support activities by adopting innovative management and business practices from the

private sector. Included in the innovative initiatives was "reengineering" or "reinventing" support functions. Many of the support functions are indigenous to installation operations. Reengineering can be characterized as streamlining, reorganizing, downsizing, consolidating, computerizing, and commercializing of operations.

Reengineering of DoD wide business processes by adopting modern business practices that will achieve world-class standards of performance. Use of electronic funds transfer (EFT) for contract payment, service contract awards, and the use of the government-wide purchase card are already being implemented at the installation level. In addition, reengineering of installation specific functions will also lead to improved efficiency and effectiveness.

The RBA advocates local communities becoming the preferred providers of support services. DoD will be revising the long-standing policy of military installation self-sufficiency and integrating into the local community. The transition will require a major reengineering effort at installations.

Competitive sourcing efforts will also generate a need to reengineer installation support functions. Separation of CA and IHG, realignment of military career path positions, and new contract oversight responsibilities will also require organization reengineering.

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IV. MARINE CORPS INSTALLATION AS A SYSTEM UNDER REFORM

A. INTRODUCTION

This chapter investigates the affect major business reform initiatives initiated by DoD are having on Marine Corps installation management practices. Marine Corps installations are represented as an organizational system operating in a larger external environmental context partly created by the DoD business reform initiatives. Organizational elements are discussed using the Organizational Systems Framework model introduced in Chapter II and illustrated by figure 2-5. (Roberts, 2000).

The revolution in business affairs (RBA) is expected to “transform” the way Marine Corps installations are managed. Better business practices are expected to emerge as the tools of the RBA are applied. These tools include efficiency and effectiveness gains through competitive sourcing of goods and services, process reengineering, outsourcing and privatizing functions that are currently done in-house, as well as regionalizing like functions. “Revolutions are not easy. They require hard work and creative thinking, however, the resulting transformation is expected to pay big dividends.” (Krulak, 1998).

A revolution implies significant changes from the way installations are operated today. The degree of expected change is not just incremental, but transformational. The organizational leaders of Marine Corps installations must continue to operate and provide all the support services they now provide while executing major business reform

initiatives. These organizational leaders are expected to successfully lead the fundamental change effort transforming installation business practices.

Installation functional communities tend to resist any change within their area of influence. Significant changes in how installations will be operated appear to be unavoidable. Are these organizational stovepipes prepared to change? Do our base operation leaders possess the requisite skills? Are the leaders adequately prepared to be successful in this transformation? These questions and others will need to be addressed as part of the revolutionary change in business affairs. If installation leaders are not adequately prepared, and therefore, must endure failure before success, the process will be painful, very painful indeed.

B. ENVIRONMENT/CONTEXT

Environment refers to the larger external environment. Marine Corps installations co-exist within the larger environment of DoD. The external environment influences the organization through the actions of people, social and political factors, technological and economic forces, and legal constraints. The environment often makes demands on the organization and imposes constraints on the organization's actions. At the same time, the environment offers opportunities for the organization to succeed.

In addition to the external environment, the context means resources and history of the organization. Resources include both tangible and intangible assets. Tangible assets are the employees, capital, technology and information that an organization contains. Perception of the organization and organizational culture are examples of

intangible assets. The history of an organization greatly influences the way it functions in the present. Past behavior of key leaders, response to past crises, and evolution of values all contribute to how an organization will act.

1. Political

The major political parties in the United States have consistently agreed on considerable reductions in the DoD budget from the recent peak in the mid 1980's. With the end of the Cold War came the expectation for a peace dividend. The American public and the Congress believe a smaller military force and reduced DoD budgets should result from the demise of the Soviet threat. The United States dominates the world as never before.

2. Economic

Mandatory spending on interest and entitlements will have grown from 22.7 percent to 72 percent of the Federal budget over the forty years from 1963 to 2003. For a quarter century, the annual expenditures of our Federal government have exceeded the available revenues. The resulting deficit spending has led to a cumulative federal debt of over \$5.6 trillion by 1999. Just the amount of interest payments required each year results in 12 percent of the total annual budget.

Eliminating the federal budget deficit and reducing the growth of national debt has become a priority within the government. Fiscal policy is as much a reason for reducing the costs of DoD as the end of the Cold War. With the aging of the baby boomer

generation, entitlement spending for Medicare and social security will continue to grow at an alarming rate. For these reasons, DoD and the Marine Corps must find ways to reduce costs.

3. Social

Some would argue that a smaller force is justified because there is no viable major military threat on the horizon for at least the next 15 years. Our troops already have the most advanced equipment of any nation in the world and our defense spending accounts for one-third of the entire world's defense outlays. Others point to the escalating entitlement spending on Medicare and Social Security as a more tangible and immediate reason for reducing defense expenditures.

4. Technological

The United States is at a technological transition point, moving into a new era when a nation's ability to wage war is far more dependent on real time information than in the past. The move into an information age has significant consequences on the DoD and USMC military capabilities. Many experts believe we are entering a period of a "Revolution in Military Affairs" (RMA). The Marine Corps and DoD are engaged in transformational change to support the RMA needs at the same time that fiscal reality is demanding reduced budgets. Clearly, the resources to support the RMA transformation must come from elsewhere within the DoD. A Revolution in Business Affairs (RBA) has evolved to redefine business functions and performance in order to increase efficiency

while maintaining the effectiveness of support functions. The RBA is expected to yield resources necessary to reinvest in the RMA transformation.

C. KEY SUCCESS FACTORS

Key success factors are the critical indicators against which an organization must demonstrate at least adequate performance if it is to prosper. The specific factors will differ for each organization. What does it take for a Marine Corps installation as an organizational system to be successful in implementing DoD business reform initiatives?

The Deputy Commandant for Installations and Logistics (DC I&L) articulates in the Installation Campaign Plan that an austere funding environment will require changes in the way installations are managed in the future. Installation leadership will need to find ways to reduce costs, minimize military personnel structure, leverage the latest technological advances, and incorporate innovative processes and better business practices from the private sector including competitive sourcing. (Mckissock, 2000)

D. SYSTEM DIRECTION

Direction setting and design factors are the two points where management can directly intervene in order to cause change in the organizational system. System direction is a management process that converts input to the organization from the external environment (including higher authority) into "steering" or "guiding" direction for the entire organization to follow. Setting overall system direction is accomplished by

establishing and communicating the critical attributes that include mandates, values, mission, strategic issues, vision, goals, and strategy.

1. Mandate

Mandates are both formal and informal requirements on what to do (and not do) from external authorities. Formal mandates for business process reform are provided to Marine Corps installations by DoD and HQMC direction. Informal mandates are embodied in cultural norms and values of the personnel affected. The DRI establishes formal mandates from DoD. The mandates include competitive sourcing of CA functions, regionalizing in high concentration areas, privatizing housing and utilities, and reengineering other installation processes. The Marine Corps Commandants guidance and Installation Campaign Plan elaborate on the DoD mandates and add an additional mandate of returning Marines to the operating forces.

a. Competitive Sourcing

The Marine Corps intends to significantly increase the number of functions competed under OMB circular A-76. Approximately 5,000 installation FTE's will be competed in a number of commercial activities over the next several years. A particular concern is the Marine Corps past performance in strategic sourcing has been limited, slow, and often ineffective. For strategic sourcing to be effective, the Marine Corps must improve their sourcing strategies and performance. (Moore, 1999).

Competitive sourcing is expected to provide tighter focus on core tasks, better service quality, more responsiveness and agility, better access to new technologies, and lower costs. Regardless of who wins the competition, annual operating costs are expected to be reduced by about 30 percent.

The Marine Corps no longer retains sufficient internal expertise to independently execute the competitions and will need to procure contractor support. The estimated up front cost of competition is \$8600 per FTE, offsetting any savings in the end. (GAO/NSIAD-99-46, 1999).

b. Regionalization

It is more costly to operate several smaller facilities that could be consolidated into a few larger ones. Areas of high installation concentration will consider regional consolidation opportunities. Sharing infrastructure across commands, bases and services can generate significant savings

A regional approach will be necessary to solve mission critical shortfalls in the future. The Commandant of the Marine Corps states the Marine Corps should pursue and adopt opportunities to enhance operational and administrative interaction with the Navy. (Jones, 2000). Opportunities that leverage innovative business practices and technology are needed for installations to achieve transformational change.

c. Privatization

In accordance with a DRI mandate the Marine Corps is seeking to transfer ownership of installation utility systems to local utilities and other entities. Many of these systems are old and in need of repair. The funding required to repair these systems far exceeds what is available. The privatization process being used is a two-phase approach. First, a request for interest (RFI) solicitation is issued. Second, a request for proposal (RFP) is issued to those entities that interest and have the capability to be successful. The DoN also requires an engineering evaluation of the system to determine the value prior to soliciting proposals. The process is cumbersome and time-consuming.

The DoD mandate is to bring all military family housing up to meet standards for adequacy by 2010. The projected family housing budgets are insufficient to meet this goal using conventional methods, therefore alternatives must be considered. Military construction, housing allowances, and privatization each contribute to the family housing initiative, however each program is managed separately and there has not been a coordinated effort. (GAO/T-NSIAD-98-115, 1998).

Adequate family housing is a critical concern for Marines with families. Substantial military construction funds would be necessary to rebuild and refurbish the existing family housing inventory to meet standards for adequacy. The Marine Corps mandates construction and renovation projects for government quarters will pursue public-private ventures (PPV) where it makes sense.

Enlisted military personnel are more likely to be married and to have children than their civilian counterparts. (Cadigan, 2000). Government owned family housing costs about \$5,000 per year more than private sector housing in the local community. A recent DoD initiative to increase basic allowance for housing (BAH) may reduce the overall need for government housing on Marine Corps installations if approved by Congress.

d. Business Process Reengineering

Many of the support functions are indigenous to installation operations. Reengineering can be characterized as streamlining, reorganizing, downsizing, consolidating, computerizing, and commercializing of operations. The RBA advocates local communities becoming the preferred providers of support services. The Marine Corps mandates that it will be revising the long-standing policy of installation self-sufficiency and integrating into the local community. The transition will require a major reengineering effort at installations.

Competitive sourcing efforts will also generate a need to reengineer installation support functions. Separation of CA and IHG, realignment of military career path positions, and new contract oversight responsibilities will also require organization reengineering.

2. Values

Values are typically part of an organizational philosophy of operations and help explain how an organization approaches its work, manage internal affairs, and relate to the external environment. Underlying organizational values drive decisions, particularly those decisions that determine future direction. The values of an organization are part of a belief system that determines behavioral norms.

The traditional Marine Corps value system of “doing more with less” and “never say no” when asked to take on another mission or support a Marine are very much prevalent in installation operations. These values are coupled with the strong belief that any problem can be overcome by hard work and working harder.

Organizationally, the Marine Corps values their people, both civilian and Marines, above all else. On a Marine Corps installation, the effectiveness of serving customers and other stakeholders is also valued. Providing services effectively and how to provide them more efficiently is an emerging value.

The operating forces are the focal point of the Marine Corps. Installations and training activities are the supporting establishment for the fleet. The "operating forces will not be the 'bill-payer' for other requirements" and will be supported with the manning and funding required to support readiness. (Jones, 1999).

The Navy and the Marine Corps are a team. The budgeting and allocation of resources should be prioritized to support building and maintaining critical capabilities of

both services. The Marine Corps should pursue and adopt opportunities to enhance operational and administrative interaction with the Navy. (Jones, 1999).

The Commandant has stated that "one of the greatest strengths of the Marine Corps is the willingness to embrace change." This value will certainly be put to the test as Installations transform their business practices.

3. Mission

Mission is simply the purpose or reason an organization exists. The primary mission of the Marine Corps is readiness for operations across the spectrum of conflict. (Jones, 1999). Installations are the fifth element of the Marine Air Ground Task Force (MAGTF). There would be no readiness without installations providing a platform for Marines to prepare and launch their forces. The installations are responsible for providing everything from live-fire "shoot and maneuver" training support to family homes, and everything in-between.

Specific missions vary at each installation, however all have many common support requirements. The common support includes providing a home base for the Marine units and their equipment, providing meaningful training opportunities and support, providing facilities to store and maintain unit equipment, and providing a place to live with community support for active duty members and their families. Installations support the quality of life (QOL) of Marines and their families. (Jones, 1999).

4. Strategic Issues

Strategic issues are fundamental policy questions or challenges that affect an organization's mandates, values, or mission. For an organization to survive and prosper, strategic issues must be dealt with quickly and effectively. (Bryson, 1995).

The Marine Corps, in recognizing the need for headquarters level direction, issued their Installations Campaign Plan (ICP) in January 2000. (McKissock, 2000). The ICP provides direction to develop, maintain, and sustain installations in the three core areas of readiness, sustainment, and reform.

a. Readiness

Installations are a critical link to sustain the operating forces training requirements and supporting quality of life (QOL) for the Marines and their families. Readiness in the context of installation requirements can be defined as the training, programs, systems, organizations, facility support, and services necessary to support the Fleet Marine Forces (FMF) in-garrison and while deployed.

b. Sustainment

Installations provide a variety of facilities and services to sustain Marines development, training, and readiness. Installations support the quality of living and working for Marines, their families and the civilian workforce. The ICP calls for adequate funding levels to maintain facilities and sustain installations at high standards to meet the requirements of the operating forces.

c. *Installation Reform*

Installation reform (IR) is the Marine Corps implementation of the Revolution in Business Affairs (RBA) mandate through incorporation of both private and public sector "best business practices". The IR program focuses on improving the delivery of goods and services while reducing costs. The IR also extends many earlier initiatives such as the National Performance Review (NPR) and the Commission on Roles and Missions (CORM), and the Defense Reform Initiative (DRI). The primary tool of IR is competitive sourcing of commercial activities to achieve efficiencies and improve effectiveness of installation support services.

5. *Vision*

A vision provides clarity of an organization's direction and purpose. Vision specifies success in terms of mission, core values, basic strategies, goals and performance factors, ethical standards and important rules for decision-making. A vision should illustrate a future state and a path to get there.

In support of transforming the business of the department, the DoN has a published business vision.

The Department of the Navy will continue to provide the dominant global naval force and develop future capabilities to safeguard the nation. The department will recruit, engage, and retain the best people in military and civilian service; deliver recognizable value for every dollar spent; and create a business environment focused on teamwork and outcomes. (Danzig, 1998).

The ICP states that it provides the vision of the Deputy Commandant of the Marine Corps for Installations and Logistics.

The ICP is my vision to ensure our installations provide and sustain the optimum facilities, services, logistics, and support services to continue to make and train Marines, and maintain readiness into the 21st Century. It will enable our Installation Commanders and our leadership to adjust for future operational concepts and meet these USMC warfighting missions. (McKissock, 2000).

Both of these "visions" provide direction setting for Marine Corps installations in terms of mission, core values, basic strategies, and goals. However, the visions articulated do not clearly illustrate a future state and a path to get there. The power of a vision statement that shows a clear understanding of purpose and the contribution of each stakeholder is undeniable. A vision statement should provide a clear sense of direction for implementing change, establish performance expectations, and create a sense of ownership among participants. (Froman, 2000).

6. Goals

The ICP identifies a need to balance self-sufficiency with the ability to acquire services from external organizations, both public and private. Installation managers will need to adopt new IT systems, innovative processes, and alternative sources to satisfy deficiencies. A regional approach will be necessary to solve mission critical shortfalls in the future. Installations must divest unneeded and excess infrastructure at every opportunity.

The ICP identifies a critical goal to retain and provide continued and uninterrupted access to ranges, airspace, and amphibious training areas. These goals are a significant challenge in the changing environment of today.

A critical concern is adequate housing services. Adequate barracks spaces will be provides to all eligible bachelor personnel. The ICP goal is to: manage bachelor quarters (BQ) consistently to meet unit integrity requirements; provide sufficient military construction (MILCON) funds to meet a two person assignment standard; use public-private ventures (PPV) projects where sensible; eliminate the backlog of maintenance; and replace room furnishings on a whole-room basis.

Housing for married Marines is also a primary concern. Installations will help families find suitable and affordable housing in the community or in government quarters. Housing referral assistance will be strengthened to provide greater access to available private sector housing. Construction and renovation projects for government quarters will pursue PPV where it makes sense.

To sustain the operating forces the ICP requires installations to measure and assess readiness of installation supporting facilities. Assessment factors and shortfalls will be identified and articulated in the Commanding Officer's Readiness Reporting System (CORRS).

Traffic management and deployment support systems will consider partnering opportunities, automation and competition where it makes sense. The ICP also directs support of DoD initiatives to reengineer personnel property and HHG movement processes.

The Marine Corps will streamline contracting processes by incorporating emerging technologies such as Electronic Commerce (EC) and Standard Procurement System (SPS) and government-wide purchase card.

Stable and sufficient Base Operating and Support (BOS) funds will be provided for installation support. A balance will be maintained between providing services and minimizing costs by selective contracting, a critical review of available resources and installation reform.

Installation Reform (IR) will rely on the four key tools of elimination, regionalization, reengineering, and competition identified in the DRI to improve business practices. Additionally, activity based costing (ABC) will be implemented to measure the cost of performance and savings.

a. Elimination

Non-critical support functions will be reviewed to identify candidates for elimination, reduction, and divestiture through privatization. Privatization is limited to utilities and family housing functions at this time.

b. Regionalization

Regional review boards will examine organizational and functional alignment to consolidate responsibilities for providing goods and services in geographical areas. The goal will be to realign organizationally when costs can be reduced while maintaining levels of service. A successful example of the Marine Corps regionalization

efforts is the Garrison Mobile Equipment (GME) consolidation in the southwestern United States. By a simple redistribution of assets over \$461,000 was saved in the first month of operation. (McDowell, 2000).

c. Reengineering

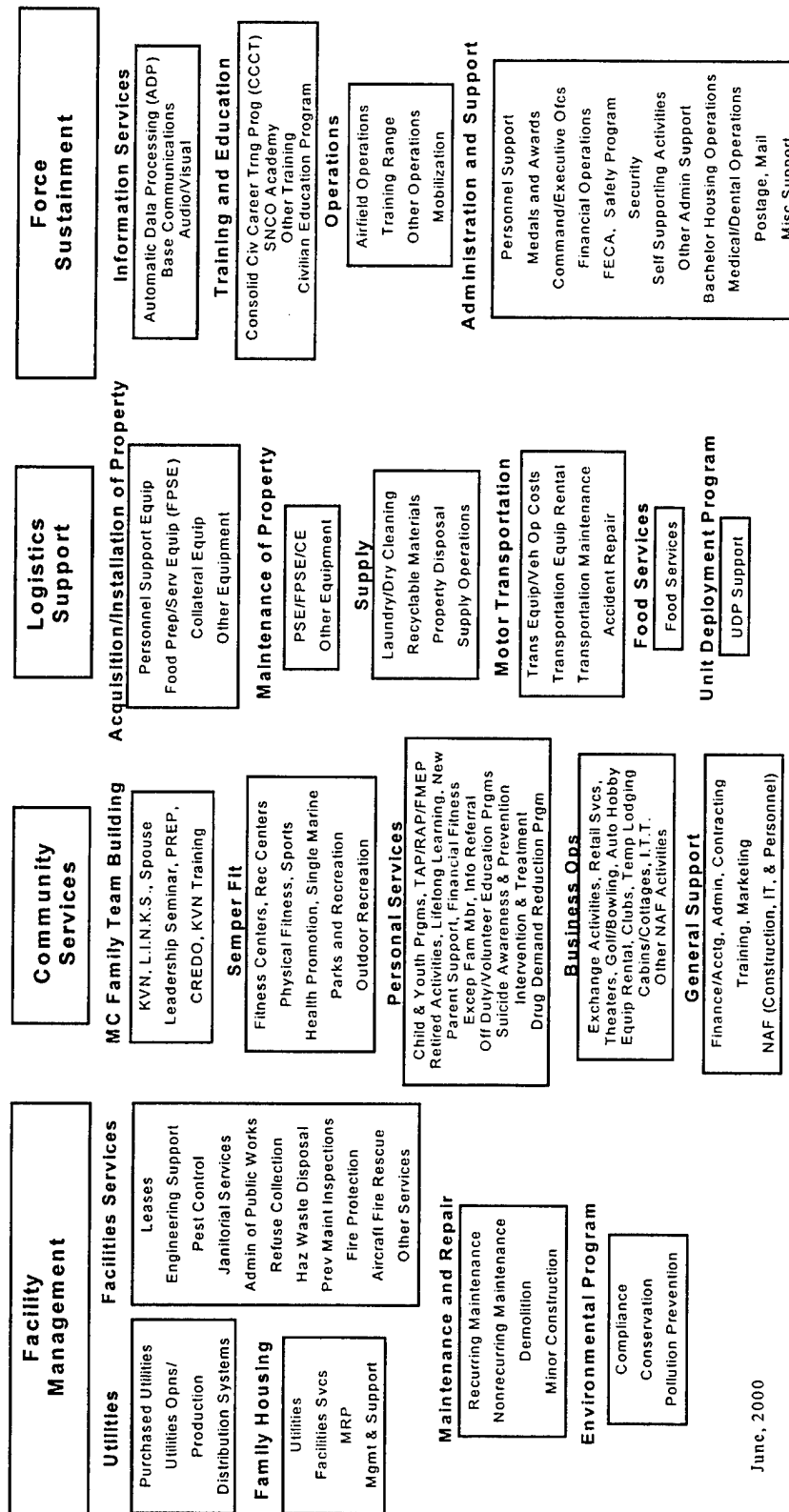
Functions that are not competed under A-76 will be reviewed and a reengineering analysis conducted to reduce costs and maintain or improve performance. Data from ABC models will be used to identify opportunities for improvements.

d. Competition

All functions containing commercial activity (CA) functions will be reviewed to determine if they should be competed under the guidance of A-76. Competitions will be completed in the minimum time possible.

The ICP states that IR will focus on a common and consistent Marine Corp-wide model of standard business areas, functions and sub-functions. The Marine Corp Installation Business Model is depicted in figure 4-1.

Installations Business Model



June, 2000

Figure 4-1. Marine Corp's Installations Business Model

7. Strategy

Strategy specifies the direction of the organization in terms of mission, values, goals and objectives. The pattern developed by organizational policies, programs, actions, decisions, and resource allocation define a strategy. Strategy is typically the first organizational component to be addressed because it establishes the criteria for choosing among alternative organizational forms.

The Marine Corps business plan provides installations with the strategies and expectations for transforming their operations and workforce to improve the delivery of goods and services at a reduced cost. The most recent business plan was issued by the Assistant Commandant (ACMC) in July 2000, and provides the following principles to guide this major change initiative.

- Management of Marine Corps installations will be an outcome-based management approach based on a full range of performance improvement and resource saving initiatives.
- The roles and expectations of the installation commander will evolve to accommodate business-oriented decision-making.
- The workforce will be kept involved and informed on initiatives for improving performance and reducing resource requirements.
- Successful and enduring organizational change will require implementing new performance and cost management skills into the Marine Corps.

The plan is intended to apply to all installation activities, both commercial (CA) and inherently governmental (IHG) functions. The overall strategy is subdivided into four distinct focus areas of planning, execution, metrics and reports, and human resources. The business plan provides policy and implementation strategy for each focus area.

a. Planning

The planning focus area concentrates on direction setting by senior leadership. One goal of the area is to provide consistent Marine Corps vision, mission, and expected outputs by publishing a consolidated Headquarters Marine Corps (HQMC) level business reform strategic plan. Business reform alternatives will be articulated by individual strategic plans at each installation. Individual strategies expressed by this focus area include:

- Develop a single USMC installation strategic plan that coordinates all HQMC and installation stakeholders.
- Develop a strategic plan and balanced scorecard for each installation based on a uniform template that supports the mission, vision, key processes and outputs, strategies and measurements contained in the USMC plan.
- Develop a plan to collect installation resource requirements in activity based format consistent with the USMC installation strategic plan and scorecard.

- Review entire organization using the strategic sourcing assessment process to determine the best sourcing alternative for all Marine Corps activities.
- Publish and implement standard definitions for business reform terms.
- Create USMC Center for Business Excellence (CBE)
- Integrate MARFORRES into Business Reform.

b. Execution

The methodology for improving business practices at installations is provided in the execution focus area. Competitive sourcing will be used as the preferred method where feasible. Other methods include regionalization and partnering with other governmental agencies. Individual strategies of the execution focus area include:

- Improve visibility of performance and cost data for installation business processes by using activity based costing (ABC) models.
- Use ABC information and the results of strategic sourcing assessments to improve performance and reduce resources through competition, regionalization, partnering with others, process management, and divestiture of functions by privatization, reduction, or elimination.
- Leverage information technology by simplifying data collection and delivering user-friendly information to the decision-maker

- Complete announced A-76 competitions on schedule and continuously review inhouse functions to identify opportunities for additional competitions.

c. Metrics and Reports

The metrics and report focus area acknowledges a need to measure savings and performance impacts. Measures are intended to ensure cost and performance improvements do not diminish readiness. Individual strategies articulated by this focus area include:

- Validate FY99 baseline ABC data and add critical performance measures.
- Measure improvements in performance and cost management of installations against the FY99 baseline.
- Review and revise expectations and measures based on strategic plans and strategic goals.

d. Human Resources

The human resources focus area addresses concerns that the business improvement processes will negatively impact the workforce. Communication and employee development initiatives are identified. Individual strategies identified in the focus area include:

- Develop a viable transition management plan that takes care of the people impacted by business reform implementation.
- Maintain communications plans that keep the workforce fully informed of all business reform initiatives.
- Identify critical business skills needed and develop an education and training plan to enhance the capabilities of the inhouse work force.
- Determine installation staff, structure, and billet requirements to sustain improved business practices.
- Develop best practices for human resource management that aligns with other improved business practices (e.g., recruiting, training, promoting, performance recognition).

E. DESIGN FACTORS

Organization design factors refer to the individual elements and the construct of an organization. The design factor elements included in this model are similar to the Congruence Model transformation process. Each of the design factors may be modified by management intervention to obtain system change. The congruence or "fit" of these elements is critical to the overall system operation.

1. Tasks/Jobs

The work of an organization is comprised of the basic or inherent tasks to be done by the individuals, groups or entire organization. Jobs are structured and arranged around the tasks to be accomplished.

Installation activities include both commercial (CA) and inherently governmental (IHG) functions. Installation functions and sub-functions are depicted in Marine Corp Installation Business Model shown by figure 4-1.

2. Technology

Technology refers to the processes, both physical and mental, used to transform inputs into usable outputs. In this context technology is more than technological devices and equipment used by people, but includes their knowledge and activities as well. Technology affects the behavior of individuals and the functioning of organizations. Enhancing the technology of an organization can lead to more efficient and effective transformation of inputs into outputs.

The technology employed to operate Marine Corps installations would not be considered “state of the art,” but rather outdated. Many of the facilities were constructed circa 1950 for something other than current use. It is common to find administrative operations in a facility that was converted from its original purpose as an open-squad-bay barracks.

The Marine Corps is significantly behind in information technology (IT). Installations are only now beginning to update IT infrastructure and still lag far behind

the other services in this area. It is still common to find entire organizations with connectivity limited to a few phone-lines and no local area network (LAN) access at all. The DoN recently awarded a large outsourcing contract that will provide IT support jointly for both the Navy and Marine Corps. (Dickason, 2000).

The people working with outdated technology have had to develop unique local solutions to get their work done. Many of these solutions are less efficient and effective than could be achieved with up to date technology. For these reasons, many manual and human intensive systems have been allowed to evolve and remain entrenched in most of the installation operation and support areas.

There is significant resistance and inertia against attempts to employ higher technology solutions. Some installation leaders and workers do not support technology improvements and fear that their jobs will be unneeded with advancements.

3. Structure

Organizational structure refers to the way groups and individuals are arranged within an organization with respect to the tasks they perform. The structure of the organization is typically established based on the policies, processes and methods formally created to get individuals to perform the tasks. An important consideration is the organization design or the process of coordinating the structural elements to achieve the desired outcomes in an effective manner.

The organizational structure of a Marine Corps installation is centralized with the Commanding General (CG) and Chief of Staff (COS) at the strategic apex of the

organization. The organizations of an installation are functionally departmentalized with a tall hierarchy and a wide span of control. The organization can best be described as mechanistic or a machine bureaucracy. The COS and functional organization leaders are the system integrators.

Command of a major Marine Corps Base is considered a “two star” billet and the rank of the CG is usually Major General. The day-to-day operations of the base are tended to by the (COS), a senior USMC Colonel (O-6). Some smaller bases are commanded by a senior USMC Colonel. Several support staff organizations and major functional directorates report to the COS and are responsible for operations within their respective areas.

The Marine Corps does not have a standardized installation or functions and responsibilities doctrine. Each individual installation is organized somewhat uniquely. Major directorate heads are generally Marines, usually at the O-6 level. Some bases refer to the functional area heads as Assistant Chiefs of Staff (ACOS). Directorates include the following functional areas: Manpower; Comptroller; Operations and Training; Installations; Logistics; Communications and Data; and Marine Corps Community Services. The support staff functions include a Headquarters Battalion, Staff Judge Advocate, Inspector, Public Affairs and Protocol among others. Staff organization heads are generally below the O-6 level. Most installations now have a functional organization supporting business reform. However, the organization is focused on near term goals such as A-76 competitions and not committed to business process management for the long term.

The Marine Corps Installation Business Model shown in figure 4-1 represents the functional areas of a typical installation. However, the Business Model doesn't represent the organizational structure uniquely different for each installation.

4. People

Understanding the experience and background, motives, expectations and mindsets of their people is of critical importance to an organization. There is substantial evidence of a strong connection between how an organization manages their people and the success it will achieve.

The personnel working at Marine Corps bases are about half uniform military and half civilian. The civilian population is comprised of both civil servant and non-appropriated fund (NAF) employees. Most functional organizations are well integrated with both military and civilian employees occupying all types of positions. One notable exception is the facilities maintenance, or "public works" organization that is almost exclusively civilian blue-collar workers.

One reason for the high degree of integration of military within the installation operations functional areas is the need to provide a "shore" rotation assignment so that Marines are "deployed" not more than half of the time. Marines are rotated about every three years and it is unlikely a Marine will receive back to back assignments to an installation billet, especially at the same base. Rarely does a senior O-6 or CG remain in a billet longer than two years. It is even more rare that a CG or senior O-6 will have had

more than one two year base assignment prior to their current assignment, and some have never been assigned to a base billet before.

All Marines are “warriors” first and an installation assignment is considered less desirable for career advancement opportunities than equivalent assignments in the FMF or to FMF staff support positions. Installation assignments are not considered to provide relevant and meaningful training and education and, therefore, are not career enhancing for many Marine Military Occupational Specialties (MOS’s). The civilians in a base, many, who are “former Marines,” are generally considered the “continuity” of base organizations.

A recent study of Navy shore installations identified 17 core knowledge, skills, and abilities (KSA) necessary to successfully manage a military installation. Most of the skills and competencies pertain exclusively to installation management. The study identified that commanding officers are less than adequately prepared for the KSA's they will need to be successful prior to assuming command. (Smith, 1996).

Installations are plagued with outdated technology and the people have had to develop unique local solutions to get their work done. The mindset that has developed is that any problem can be overcome by working harder with the same tools. Many of these tools are less efficient and effective than could be achieved with up to date technology and innovative solutions. The reward system recognizes working harder as an attribute and hinders innovation and creative thinking. The installation leadership is still very much risk adverse.

5. Processes/Subsystems

Processes and subsystems are what interconnect and link the elements or design factors of an organization together. Marine Corps installations have the characteristics and similar critical processes as most typical organizations.

a. Financial Management

Financial accountability and control are the steps a manager takes to assure performance conforms as near as practical to plan. Financial management, budgeting and control are fundamental processes of organization management.

Resources for installation operation and support are limited and constrained. Financial resources are declining as the Marine Corps looks for ways to recapitalize aging weapons systems. Human resources are also declining, both military and civilian. Financial resource authorization is centralized at one of three Major commands, Marine Forces Pacific, Marine Forces Atlantic, or Headquarters Marine Corps. Annual budgets, staffing plans and letters of allowance for civilian personnel provide the resource authorizations to installations.

Unlike the operational side of the Marine Corps, installations do not have a well-defined strategic direction and generally no interactive control systems. Boundary systems typically follow along functional area stovepipe lines. Diagnostic control systems also emanate from the functional area alignments.

Locally, the resources are controlled by functional area as well. Allocation of discretionary resources is dependent on local program need and priority set by the CG.

The COS generally presides over an Executive Steering Committee (ESC) and a Position Management Board (PMB) providing direction for resource allocation or reallocation.

Planning is typically limited to the current fiscal year.

Better accounting policies and procedures are needed in order to accurately track and compare costs to support the complex and difficult decisions required in the competitive process. The Marine Corps has chosen to implement Activity Based Costing and Management (ABC/M) to augment their existing financial accounting system in order to achieve this goal. The change in accounting procedures is expected to occur simultaneously with the other changes. The Marine Corps has articulated a plan for implementing ABC/M at the installation level. However, clear direction has not been established on how the Marine Corps will use ABC/M outside of the installations. It appears that ABC/M will be an additional requirement at the installations.

The existing financial management system for accounting and budgeting does not support the needs of installation managers. The system is cumbersome, labor intensive, and severely restricted in capability, as it is antiquated and obsolete. Unfortunately, the existing system is the primary means of financial management across the Marine Corps and is used for all critical resource applications. For these reasons, there is formidable resistance to change. Overcoming these problems may benefit from installation reform as the function itself may be an ideal candidate for outsourcing to a private sector specialist, similar to the proposed outsourcing of all Defense Finance and Accounting (DFAS) operations.

b. Human Resource Management

Human resource management includes the policies of recruiting, selecting, employee development, education and training that produce the human talent required to achieve the strategic direction specified by management. Also included in human resource management are the reward systems that provide incentive and motivation for accomplishment of goals. The purpose of a reward system is to align employee goals and direction with the goals of the organization. Human resource policies build the organizational capabilities to execute the strategic direction set by management.

Incentive and rewards for successful execution of assigned base operation and support mission are generally in the form of development opportunity and rank promotion. Functional area managers typically are recognized and rewarded for program resource growth over a past years baseline. There is no incentive to reduce resource requirements. A functional area manager would generally receive a negative incentive and recognition for executing a program without exhausting all available resources. Typically, when a program manager is successfully executing a program under cost, the "saved" resources are reallocated to another program that is not doing as well. In terms of business reform, the operating reward system meets the criteria of the classic folly of "rewarding A, while hoping for B." (Kerr, 1995).

The Marine Corps IR initiative will impact both military and civilian personnel. Functions performed by military personnel will be converted to civilian or outsourced wherever possible, without impacting career progression and rotation

requirements. The ICP acknowledges civilian personnel reductions will occur from the IR initiative. However, it is intended the workforce be empowered to participate in the IR process and comprehensive communication plans be implemented to keep the workforce informed. All avenues available within the civilian personnel management system are planned to be utilized to minimize disruption while maximizing retraining and outplacement opportunities.

A recent study of Navy shore installations identified 17 core knowledge, skills, and abilities (KSA) necessary to successfully manage a military installation. Most of the skills and competencies pertain exclusively to installation management. The skills include facility and installation finance, civilian personnel, urban planning, environmental issues, legal issues, contracting and outsourcing, community relations and morale, welfare and recreation (MWR). The study identified that Naval officers are less than adequately prepared in the requisite KSA's prior to assuming command. The study also identified that the scope of an installation commander is much broader than the scope of an equivalent warfighting command. (Smith, 1996).

c. Communication, Information, Planning and Decision Making

How information is gathered and processed are important considerations in decision-making and communication processes. Decision and information system processes are critical to link the organization both horizontally and vertically.

Organizational structure of a typical Marine Corps installation can be described as highly mechanistic and resistant to change. There is a tall hierarchy of

authority or “chain of command”. Most decision-making “authority” is centralized with the CG and COS at the strategic apex of the organization, similar to the operating forces structure within the FMF.

Subordinate organizational elements are structured by functional area with a multitude of functional specialists responsible for executing their somewhat standardized assigned functional aspects of the organization. This technostructure contains the real power of the organization; a true Mintzberg machine bureaucracy. Rapid rotation at the top of the hierarchy reinforces resistance to real change. Partially implemented changes in organizational direction routinely fade with the change of command. Initiating and sustaining change in this environment is difficult.

Few installation CG’s or COS’s have time to develop or execute their duties with a true business focus. This is not to say that they do not possess the ability to make good business decisions. However, in a warrior community they usually did not rise to the position they hold because of their business decision-making skills. They are good leaders and attempt to compensate for a lack of business “experience” and “skills” with “intuition” and “gut feel” when faced with a difficult business decision. There is no true business support organization with the knowledge skills and abilities available to advise the leadership on critical business decisions.

d. Acquisition and Contracting

Another important process of an organization is what goods and services are obtained from external sources, and how they are procured.

Marine Corps installations generally have two warranted contracting entities for the acquisition of goods and services. An internal Marine Corps contracting office procures the goods and services consumed by the base while a Naval Facilities Engineering Command (NAVFAC) contracting office is responsible for real property maintenance (RPM) and construction requirements.

The NAVFAC entity is the only DoN warranted contracting office with authority to contract for facility construction services, RPM services, maintenance and repair services under the Davis-Bacon Act, architect and engineering (A/E) services, utility services and commodities, and real property contracts. These contracts are the majority of contracting requirements on a typical Marine Corps installation. The internal contracting office awards a few service contracts under commercial goods and service contract act requirements, usually for small or limited amounts.

Commercial activities under consideration for A-76 competitions include most of the functional areas of RPM and facility maintenance where NAVFAC is the only authorized DoN authority. The Marine Corps has expressed a desire to award any A-76 contracts for installation support through the Marine Corps internal contracting office. Any large installation service contract from an A-76 study in the facility maintenance functional area would certainly exceed the existing authority of a Marine Corps contracting office. In addition, the service contracting experience level of the Marine Corps contracting offices is substantially less than the experience level of the corresponding NAVFAC office. For example, one Marine Corps regional contracting office is responsible for administering less than \$5 million annually in service contracts,

while the corresponding NAVFAC office administers over \$1 billion annually. The lack of experience in large service contracting experience is a major concern for the success of outsourcing base services.

F. CULTURE

Management causes a cultural change by intervening in system direction setting or organization design factors. Organizational culture cannot be acted upon directly by management intervention. Organizational culture is a result of behavior and attitudes of the people within the organization.

The basic components of organizational culture are values, beliefs, and norms. Organizational core values are what an organization "believes" to be good or bad. These values cannot be proved or disproved, either you agree or disagree. Beliefs are specific views on how the world works. Beliefs may or may not be true and are open to debate. Beliefs are often built around cause and effect relationship. Norms represent the behavior or expectation of behavior caused by the values and beliefs of an organization.

Marine Corps installations have two distinct subcultures today. Norms and values differ between the civilian and military population. Some of this difference may be caused by the aging and shrinking of the civilian workforce over the last decade. (Ferris, 1999). Outsourcing may enter a third distinct subculture when contractors enter the installation work force in large numbers. Members of the American military are much more conservative than their civilian counterparts and the gap appears to be growing.

(Korb, 1996). Both harbor strong negative stereotypes about the other according to a recent study. (Kennedy, 2000).

Outsourcing and privatization creates its own cultural gap between civilian employees and military members. The military members generally do not fear loss of job from outsourcing, where as for civilians, particularly the lower grade white-collar and blue-collar workers, their jobs are threatened. White-collar workers in higher grades are an exception to the threat of losing their jobs to outsourcing. (Brower, 1997).

The Marine Corps espouses a highly held value of putting their people first. One focus area of their Business Plan is on taking care of their people and implementing best practices in human resource management. An outsourcing strategy has proven to weaken or destroy some organizational cultures in the private sector when applied in efforts to minimize costs. There is a substantial and rapidly expanding body of evidence that points to a strong connection between how firms manage their people and the economic results achieved. (Pfeffer, 1999).

The Marine Corps installations have a strong sense of independence and self-reliance. A high value is placed on maintaining the separation of one installation from others. The norm of this behavior will be difficult to overcome when regional consolidation is considered. Marine Corps installations are even more wary of losing their identity when considering consolidating installations with other service or when relying on the local community as a service provider.

Marines and their leaders believe strongly that they have unique support requirements. The belief will be hard to overcome when considering reform initiatives

such as housing privatization. It will be a difficult decision for any Marine Corps installation Commander to relinquish control of a support service such as family housing to a private sector contractor.

G. OUTPUTS

Output describes the goods or services the organization produces in very general terms. One indicator of success for the organization can be measured in terms of output. Performance can be determined in terms of three factors. First, how well the organization meets strategic objectives. Second, how well the organization uses scarce resources. Third, how successful the organization is at positioning itself to seize the opportunities and stave off the threats presented by the environment.

Typical measures of success for installation operations include providing support services for the quality of life (QOL) of Marines and their families, providing training support for operational units, and providing mission readiness support for operational units stationed on the installation. Additionally, installations provide support for military retirees and to the community at large as outputs.

The Marine Corps has not established any standard measurement process for measuring services provided. Expectations are high that services meet the requirements of service receivers. The default standard is typically reaction to feedback from service receivers. The feedback mechanisms also substitute for performance indicators.

A common measure within each of these outcomes is the ability to maintain self-sufficiency. Successful achievement of the stated outcomes relies on the ability to

provide for them internally, on demand, and without interference or reliance on external entities.

H. OUTCOMES

The outcomes of an organization can be defined as the consequences or implication of the outputs to stakeholders. Outcomes must be viewed by the organization in context with the external environment.

The outcomes of Marine Corps installations are the consequences of services provided to stakeholders, especially the Marines and their family members that work and live on the installation. Installation services are support for the quality of life (QOL) of Marines and their families, training support for operational units, and mission readiness support for operational units stationed on the installation.

The accepted measures of merit for outcomes include quality, cost, efficiency, and effectiveness of providing the services. These outcome characteristics are important but subjective and difficult to measure directly. Few quantifiable output measures are routinely used, although some are measured. There are fewer performance measures or accepted standards of performance for these outputs.

I. SUMMARY

This chapter described a Marine Corps installation as an organizational system using the Organizational Systems Framework model introduced in Chapter II and illustrated by figure 2-5. The system is reviewed under the effects major business reform

initiatives initiated by DoD are having on Marine Corps installation management practices. Marine Corps installations are represented as an organizational system operating in a larger external environmental context partly created by the DoD business reform initiatives.

Operation of a major Marine Corps installation is a complex process requiring many different disciplines and skill sets. Installations are like major cities in scope and responsibility. However, many of the support services provided by installation personnel are not considered core competencies of the Marine Corps. To a large degree, these installation services are commercial activities (CA) that are not inherently governmental (IHG) or military in nature. Therefore, determination of who will provide the services and how they will be provided is widely unrestricted.

Successfully shifting base operation priorities will require transformational change. The change is more than the usual reorganization or occasional contracting out of a single function. Major decisions will be required, true private sector business type decisions. Shifting the key performance indicator of self-sufficiency to effectiveness and efficiency will require a new type of decision making system for our base operation leadership. The new decisions will include determining what functions are core requirements; which functions should be privatized; what property should be divested; what services are necessary to provide; which services should be regionalized; which services truly require in-house providers; and which services should be competitively sourced. Reducing the costs of the Marine Corps support infrastructure through better business practices is expected to release the funds necessary to support weapons system

modernization. One of the primary elements of business reform is strategic sourcing. Strategic sourcing maximizes savings through eliminating, improving, or streamlining processes, and utilizing competitive sourcing processes using A-76 procedures where they apply. (Pint, 1997). A particular concern is the Marine Corps past performance in strategic sourcing has been limited, slow, and often ineffective. For strategic sourcing to be effective, the Marine Corps must improve their sourcing strategies and performance. (Moore, 1999).

V. SURVEY DATA AND ANALYSIS

A. INTRODUCTION

A survey was conducted to augment the archival research data from literature reviews presented in the preceding chapters. The purpose of this chapter is to present survey data and an analysis of the data collected. First, a description of the methodology employed in conducting the survey. The intent of the survey was to provide opinion data to support this thesis from Marine Corps installation managers. Second, data and data analysis will be presented using the Organizational Systems Framework model introduced in Chapter II and illustrated by figure 2-5.

Installation managers are in a unique position to assess actual organizational system elements because they are actively involved in implementing the initiatives mandated by the DoD change initiatives and Marine Corps direction. The focus of the survey was to obtain feedback directly from Marine Corps installation managers on the affects of major DoD business reform initiatives to supplement the archival research data presented in Chapters III and IV.

B. METHODOLOGY

An opinion survey was prepared with questions categorized by the five organizational system areas of system direction, design factors, culture, outputs and outcomes. The survey was provided to 66 civilian and military managers at three Marine

Corps Installations. Responses were received from 35 managers in the time period requested. Each responder was asked to select the most appropriate response based on a five-level Likert scale. The survey questions were evaluated using a Chi-square (χ^2) test for statistical significance. The purpose of the χ^2 test is to determine if the responses to each question were random or whether something unrelated to chance is occurring. The χ^2 test used for data analysis was the Goodness of fit test and the formula. When the calculated value of χ^2 is equal to or greater than 3.84, the probability that the responses did not occur randomly is at least 95 percent. Or stated another way, the probability that the responses were random is 5 percent or less.

Operation of a major Marine Corps base is a complex process requiring many different disciplines and skill sets. Each installation has unique requirements and therefore unique characteristics. There are however many similarities and common support requirements. The Survey instrument was intended to focus on common support requirements. The three Marine Corps installations include two West Coast and one East Coast installation were chosen as a sample representative of all Marine Corps installations.

C. SURVEY DATA

The focus of the survey was to obtain feedback directly from Marine Corps installation managers on the affects of major DoD business reform initiatives to supplement the archival research data. Those actively involved in executing the change process at Marine Corps installations were asked to provide substantive data. Data and

data analyses are presented using the Organizational Systems Framework model introduced in Chapter II. The survey questions, data, and data analysis is presented in detail in Appendix 1.

1. System Direction

Two objectives were intended by the survey questions under the systems direction area. First, question one through four were devised to validate the findings of the archival research that competitive sourcing, regionalization, privatization and business process reengineering are affecting installation management practices. Second, question five was devised to ascertain if the Marine Corps vision for installations in the future has been clearly articulated to the installations managers. The system direction area survey questions are restated below.

- Question 1: Competitive sourcing base services by the A-76 process is changing base operations.
- Question 2: Consolidation or regionalizing base support functions is changing base operations.
- Question 3: Privatizing functions such as family housing and utilities is changing base operations.
- Question 4: Business Process Reengineering such as activity based costing (ABC) and direct vendor delivery is changing base operations.

- Question 5: The Marine Corps has articulated a clear vision that describes what bases will look like in the future.

Chi-square analysis of the survey results indicates that responses for all five questions have a χ^2 greater than 3.84, $p \leq .05$. Installation managers who responded significantly perceive that competitive sourcing, regionalization, privatization, and business process reengineering are changing installation operations. The analysis indicated their responses are not likely due to chance. The installation managers also indicated strong disagreement that the Marine Corps has articulated a clear vision of how installations will be organized in the future. The mandated major business reform initiatives of DoD are clearly impacting the operations of Marine Corps installations. The survey results for the system direction area are presented in Table 5-1.

AREA	Question Number	MEAN AVE	Disagree	Agree	AGREE OR DISAGREE	CHI Square	p \leq .05 Yes/No
SYSTEM DIRECTION	1	4.20	3	30	Agree	25.04	Yes
	2	4.26	3	32	Agree	27.03	Yes
	3	4.00	3	27	Agree	22.04	Yes
	4	3.80	5	25	Agree	18.05	Yes
	5	2.03	28	1	Disagree	25.04	Yes

TABLE 5-1 SYSTEM DIRECTION SURVEY QUESTION RESULTS

2. Design Factors

The design factors survey questions focused on specific areas concerning people, processes and structure elements. Questions one through six were intended to provide an indication of installation managers perception of the effectiveness and efficiency of base services provided by Marines, civil servants and contractors. Questions seven and eight solicit the managers perceptions concerning personnel knowledge, skills and abilities of business practices. Questions nine, ten and 13 through 15 assess process element perceptions. Questions 11 and 12 indicate installation managers opinion on specific structure elements. The design factors area survey questions are restated below.

- Question 1: Base services provided by Marines are effective.
- Question 2: Base services provided by Civil Servants are effective.
- Question 3: Base services provided by Contractors are effective.
- Question 4: Marines are efficient at providing base services.
- Question 5: Civil Servants are efficient at providing base services.
- Question 6: Contractors are efficient at providing base services.
- Question 7: Base personnel possess the knowledge, skills and abilities (KSA's) to successfully implement business reform.
- Question 8: Base personnel possess the KSA's necessary to operate like a private sector business.

- Question 9: The base financial management system effectively supports business operations.
- Question 10: Base personnel possess the KSA's to successfully execute major service contracts.
- Question 11: The existing base organization structure will support business reform.
- Question 12: The base is prepared to integrate contractors into the workforce.
- Question 13: Base personnel are rewarded for supporting business reform.
- Question 14: A base staff job is detrimental to a Marine Officer's career.
- Question 15: The Marine Corps adequately prepares Officers for base duty assignments.

Survey analysis indicates results are significant for all design factor questions except four and 14 ($p \leq .05$). Again, the responses from managers are not random. Respondents significantly agree that civil servants and contractors are *efficient* in providing installation services. Results were not significant concerning whether or not Marines are *efficient* in providing installation services. Results indicate that installation managers believe Marines, civil servants, and contractors are *effective* at delivering installation services.

Analysis of survey questions on the business knowledge, skills, and abilities (KSA) yielded a significant results (χ^2 value greater than 3.84, $p \leq 0.05$) indicating installation managers believe personnel may not possess the necessary KSA's to

successfully implement business reform or to operate like a private sector business.

Results also indicated that existing base structure may not adequately support business reforms and that installations may not be prepared to integrate contractors into the existing workforce.

Analysis of the process area design factor survey questions were significant (χ^2 value greater than 3.84, $p \leq 0.05$) indicating that the existing financial management system may not support business reform and that personnel may not be sufficiently rewarded for business reform efforts. In addition, results were significant that Marine officers may not be adequately prepared for installation assignments. Results were not significant possible detrimental results to an Officer's career from installation assignments. Findings were not significant concerning the ability of base personnel to successfully execute major service contracts. The survey results for the system direction area are presented in Table 5-2.

AREA	Question Number	MEAN AVE	Disagree	Agree	AGREE OR DISAGREE	CHI Square	p ≤ .05 Yes/No
DESIGN FACTORS	1	3.46	5	20	Agree	13.07	Yes
	2	3.89	1	27	Agree	24.04	Yes
	3	3.37	3	16	Agree	11.08	Yes
	4	3.09	12	17	Agree	3.20	No
	5	3.71	2	23	Agree	19.05	Yes
	6	3.31	5	18	Agree	11.08	Yes
	7	2.74	17	10	Disagree	5.14	Yes
	8	2.63	20	7	Disagree	11.08	Yes
	9	2.09	26	5	Disagree	19.05	Yes
	10	3.11	10	16	Agree	4.17	Yes
	11	2.69	20	9	Disagree	9.09	Yes
	12	2.57	16	4	Disagree	10.08	Yes
	13	2.37	24	5	Disagree	17.05	Yes
	14	2.94	10	11	Agree	0.00	No
	15	2.40	21	3	Disagree	16.06	Yes

TABLE 5-2 DESIGN FACTOR SURVEY QUESTION RESULTS

3. Culture

The culture area survey questions were developed to ascertain differences in values and patterns of interaction that may impede integration efforts. The area concerning the differences in values was addressed by questions one through six. Questions seven through thirteen assesses interaction patterns and attempt to ascertain if the culture impedes efforts to integrate Marine Corps installations with other communities as mandated by the DoD change initiatives. The culture area survey questions are presented as follows.

- Question 1: Marines are comfortable interacting with other Marines for base services.
- Question 2: Marines are comfortable interacting with Civil Service employees for base services.
- Question 3: Marines are comfortable interacting with Contractors for base services.
- Question 4: Civil Service employees have the same values as Marines.
- Question 5: Contract employees have the same values as Marines.
- Question 6: The Installation Commander should be in control or command of service providers.
- Question 7: Marine Corps bases should be integrated with the local community.

- Question 8: Marine Corps bases should be consolidated regionally.
- Question 9: Marine Corps bases should be consolidated with Navy bases.
- Question 10: Marine Corps bases should be consolidated with bases of all services.
- Question 11: Marine Corps bases should be integrated with the local community.
- Question 12: Family housing should be provided by Marine Corps bases.
- Question 13: Marines and their families have unique support requirements when compared with the public sector.

Results were significant that installation managers may perceive a clear difference in values between Marines and contractors providing services. The data further suggest that Marines may not be comfortable interacting with contractors for providing base services. Additionally, Marines may be comfortable receiving support services from civil service personnel, although the values of Marines and civil service personnel may differ. Results indicate that installation managers agree that a hierarchical control system should exist with installation commander having ultimate authority.

Respondents significantly perceive resistance in terms of Marine Corps installations being consolidated with Navy installations, other service installations, or integrated with the local community. The finding was not significant concerning whether Marine Corps installations should be consolidated regionally.

Respondents clearly perceived that Marine Corps installations should provide family housing. Additionally, the installation managers perceive that Marines and their families have unique requirements when compared with the private sector.

The survey results for the culture area are presented in Table 5-3.

AREA	Question Number	MEAN AVE	Disagree	Agree	AGREE OR DISAGREE	CHI Square	p ≤ .05 Yes/No
CULTURE	1	4.29	0	31	Agree	29.03	Yes
	2	3.37	7	18	Agree	9.09	Yes
	3	2.86	12	8	Disagree	2.25	No
	4	3.06	14	13	Disagree	0.00	No
	5	2.20	22	1	Disagree	19.05	Yes
	6	4.06	4	28	Agree	22.04	Yes
	7	2.83	15	9	Disagree	4.17	Yes
	8	3.09	16	17	Agree	0.00	No
	9	2.20	24	6	Disagree	16.06	Yes
	10	2.06	24	5	Disagree	17.05	Yes
	11	2.69	16	8	Disagree	6.13	Yes
	12	3.26	9	15	Agree	4.17	Yes
	13	3.77	8	25	Agree	15.06	Yes

TABLE 5-3 CULTURE SURVEY QUESTION RESULTS

4. Outputs

The objective of the survey questions for the output area was to determine what outputs are critical and if they are measured and assessed. Question one through seven were devised to determine the service critical outputs of a Marine Corps installation. Question eight was intended to determine the Marine Corps installation managers opinion on use of a standard measurement process for services provided. Question nine

was intended to determine the managers opinion on use of a standard performance indication system. The output area survey questions are restated below.

- Question 1: Providing a place for the **FMF to train** in support of improving their readiness is one of the most important outputs.
- Question 2: Providing a place for the **FMF to work** and maintain their equipment readiness is one of the most important outputs.
- Question 3: Providing a place for **Marines and Family Members to live** is one of the most important outputs.
- Question 4: Providing **support services for Marines** is one of the most important outputs.
- Question 5: Providing **support services for Marines and Family members** is one of the most important outputs.
- Question 6: Providing support services for **military retirees** is one of the most important outputs.
- Question 7: Providing support services for **the community** is one of the most important outputs.
- Question 8: A standard **measurement process** is used for measuring the services provided.
- Question 9: **Performance indicators** that identify how well services are provided are in use.

Chi-square analysis of the output area survey questions found that installation managers significantly perceive ($p \leq .05$) that the outputs of providing a place for the Fleet Marine Forces (FMF) to work, train, and live is important. The findings of the survey also indicate significant agreement that providing support to the Marines, their families and military retirees is important. Results found that installation managers perceive that providing support to the local community at large may not be an important output.

Results indicated that installation that installation managers may not have a standard process for measuring the services they provide or performance indicators that identify how well they provide the services. The survey results for the output area are presented in Table 5-4.

AREA	Question Number	MEAN AVE	Disagree	Agree	AGREE OR DISAGREE	CHI Square	p \leq .05 Yes/No
OUTPUTS	1	4.86	0	35	Agree	33.03	Yes
	2	4.66	0	33	Agree	31.03	Yes
	3	3.83	5	25	Agree	18.05	Yes
	4	4.20	0	31	Agree	29.03	Yes
	5	4.09	0	28	Agree	26.04	Yes
	6	3.23	10	16	Agree	4.17	Yes
	7	2.03	28	3	Disagree	23.04	Yes
	8	2.26	25	4	Disagree	19.05	Yes
	9	2.63	17	7	Disagree	8.10	Yes

TABLE 5-4 OUTPUTS SURVEY QUESTION RESULTS

5. Outcomes

The survey questions in the area of outcomes reflect respondents perception about what installation outcomes are important. Questions one through six target specific outcomes identified in the earlier research as the important outcomes for successful business reform. Question seven identifies perceptions on how well the Marine Corps has articulated their business reform expectations. Question eight identifies whether respondents have a clear understanding of their role in business reform. The outcome area survey questions are restated below.

- Question 1: The **quality** of delivered services to stakeholders is one of the most important outcomes.
- Question 2: The **effectiveness** of delivered services to stakeholders is one of the most important outcomes.
- Question 3: The **cost** of delivered services to stakeholders is one of the most important outcomes.
- Question 4: The **efficiency** of delivered services to stakeholders is one of the most important outcomes.
- Question 5: **Returning Marines** to the FMF by reducing the number assigned to base operations is one of the most important outcomes.
- Question 6: **Outsourcing** base services is one of the most important outcomes.

- Question 7: The **expectations** of business reform have been adequately articulated by the Marine Corps.
- Question 8: I have a clear **understanding** of my role in executing Marine Corps business reform.

All responses in the outcomes area were significant (χ^2 value greater than 3.84, $p \leq .05$). There was strong agreement the important outcomes include quality, effectiveness, efficiency, and cost of services delivered by installations as identified by the DoD major reform initiatives. Respondents indicated that returning Marines to the FMF as identified by CMC guidance is an important outcome. The results indicated that respondents do not perceive outsourcing services is an important installation reform outcome although outsourcing services is a clear mandate.

Respondents indicated that the Marine Corps may not have articulated business reform expectations adequately. However, respondents said that they have a clear understanding of their own role in business reform. The survey results for the outcome area are presented in Table 5-5.

AREA	Question Number	MEAN AVE	Disagree	Agree	AGREE OR DISAGREE	CHI Square	p \leq .05 Yes/No
OUTCOMES	1	4.40	0	34	Agree	32.03	Yes
	2	4.46	0	34	Agree	32.03	Yes
	3	3.97	3	28	Agree	23.04	Yes
	4	4.26	0	31	Agree	29.03	Yes
	5	3.89	3	25	Agree	20.05	Yes
	6	2.31	20	5	Disagree	13.07	Yes
	7	2.40	22	5	Disagree	15.06	Yes
	8	3.51	9	23	Agree	12.07	Yes

TABLE 5-5 OUTCOMES SURVEY QUESTION RESULTS

D. SUMMARY

This chapter presented survey data from an opinion survey. Operation of a major Marine Corps base is a complex process requiring many different disciplines and skill sets. Each installation has unique requirements and therefore unique characteristics. There are however many similarities and common support requirements. The Survey instrument was intended to focus on common support requirements. The survey was conducted at three Marine Corps installations including two West Coast and one East Coast installation chosen to be representative of all Marine Corps installations.

The questions were arranged using the Organizational Systems Framework model areas of system direction, design factors, culture, outputs, and outcomes. The survey was provided to 66 civilian and military managers and responses were received from 35 managers by the requested time. The responses were analyzed using a Chi-square (χ^2) goodness of fit test to determine statistical significance. The results of the opinion survey and analysis of the data were presented in this chapter. Significant survey findings were identified and presented with the analysis. The survey instrument and raw data is presented in Appendix A.

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VI. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

The primary thrust of this study was to conduct a comprehensive review and analysis of recent DoD business reform initiatives and the impact they are having on the operation and management of Marine Corps installations. The reform initiatives were limited to those that substantially impact the management of a major Marine Corps installation and require change to current operations. The study analysis was based on an Organizational Systems Framework model applied to a typical Marine Corps installation as the organizational system under change.

The Marine Corps is changing the way installations are operated and managed because of the effect major DoD reform initiatives are causing. Based on the results of this study, implementation of major initiatives is problematic due to incongruence between direction (strategy), certain design variables (structure) and results (culture, output, and outcomes). This chapter summarizes the findings and provides recommendations in terms of an Organizational Systems Framework. The basic premise of systems theory is that organizational success is a function of the congruence or fit among three key areas: direction, organizational design, and results.

B. CONCLUSIONS AND RECOMMENDATIONS

The scope of this research lead to a number of conclusions and recommendations on business reform initiative impacts on the operation of Marine Corps installations. Conclusions and recommendations are presented in the five Organizational Systems Framework areas of system direction, design factors, culture, outputs and outcomes. The conclusions are drawn from the data presented in the preceding chapters of this thesis and particularly Chapters IV and V. The recommendations are the researchers opinion based on the findings, and offered as ways to assist senior leaders and managers to obtain desired results of major business reform initiatives.

1. System Direction

Conclusion 1: System direction and design factors are the two organizational system areas that senior leadership can operate on to effect system changes. The Marine Corps has not articulated and communicated a clear vision of the future state that installations are expected to achieve. Installations are unable to develop and implement a strategy capable of attaining that end state when the vision is unclear.

The Marine Corps leadership appears to be reacting to mandates from DoD and directing the installations to initiate action based on real or perceived need to move forward on the initiatives of competitive sourcing, regionalization, privatization, and business process reengineering. The installation managers have responded, but do not totally understand what they are expected to achieve. The apparent intent to rectify this situation is stated in the Marine Corps business plan as development of a comprehensive

strategic plan at the headquarters level, with supporting plans at each installation. A clear vision articulating the intended target and end state must precede any meaningful strategy.

Recommendation 1: The leadership of the Marine Corps should develop a clear vision for installations delineating those functions considered critical to their success. The lessons learned from the private sector indicate that successful businesses identify what functions are critical to their success and then concentrate on the core competencies necessary to excel in those critical functional areas. The de facto vision operative in Marine Corps installations today is one of self-sufficiency in all functional areas. Business process reform is intended to change the vision, becoming more efficient and effective by seeking the optimum service provider in each functional area.

The Marine Corps should identify and commit to maintaining installation core competencies in house. On the other hand, a strategy should be developed to outsource functions that are not core, and which a private sector can perform better. These functions should be outsourced directly. What functions are core competencies and what functions should be outsourced need to be clearly identified to the installations.

There is also a third category of support functions smaller than the other two. These functions would include those that are not core and also do not have a private sector provider with a clear advantage. These are the only functions that are suitable for competitive sourcing under the A-76 process. A decision to competitively source a particular service should be made only after determining the service is not core and that no private sector provider with significant advantage is available.

2. Design Factors

Conclusion 1: The organizational structure of a Marine Corps installation is centralized with the Commanding Officer at the strategic apex of the organization possessing ultimate decision making authority. The organizations of an installation are functionally departmentalized with a tall hierarchy and a wide span of control. The Marine Corps installation as an organization can best be described as a centralized machine bureaucracy. The data indicates that the existing Marine Corps organization structure will not adequately support business operations or business reform initiatives.

Recommendation 1: The Marine Corps should consider restructuring installation commands to be more decentralized. One approach would be to create a new position of "Installation or 'Garrison' Commander" (for example) at the O-6 level with a more narrow focus and responsibility than the existing commander. For example, the position of Chief of Staff could be vested with command authority for all installation support decisions. The existing position of Commanding General would still have overall responsibility, but without the burden of day to day installation operation decisions. This scheme would allow business decisions to be more fluid and to be made more rapidly. A supplementary benefit would be a career path specifically targeted for Marine Corps officers with installation management experience.

An additional structural change recommendation is to create a business office responsible for managing all installation business processes. The business office concept should be similar to the way a city managers position operates in a city government. The

business office would need to be staffed with personnel that have the requisite business knowledge, skills and abilities. The business officer position would most appropriately be staffed by a civilian to support the need for extensive corporate knowledge and experience necessary for the long-term objectives of the installation. Some Marine Corps installations have recently created a business reform office to provide support for implementing reform initiative projects. The concept of a dedicated business office and business manager is far more comprehensive with long term focus as compared to the limited reform projects that are short term. The current business reform office should be incorporated under the purview of the overall business office.

Conclusion 2: Given the complex environment and wide scope of problems encountered in many areas of installation operations, coupled with limited emphasis on professional development within these disciplines, it is important, if not critical, that installation managers possess mature business skills. Conclusions indicate that in general Marine Corps installation managers do not possess the requisite knowledge, skills and abilities (KSA) to operate installations as business entities. The data also indicates that Marine Corps installation managers do not have the necessary KSA's to successfully implement business reform initiatives.

Recommendation 2: The Marine Corps cannot instantaneously solve the problem of a lack of business process KSA's. A two pronged approach focused on short and long term objectives might prove optimal. An effective near term solution would include increasing outside expertise. Personnel with the requisite KSA's should be brought in from the private sector either as Marine Corps employees or by support

contract. A secondary long-term effort should be initiated to provide meaningful education and training to current installation personnel. A potential model to emulate appears to be public administration education and experience of a City Manager in local government.

Conclusion 3: The data indicates installation personnel are not rewarded for their efforts implementing business reform initiatives. Until recently there was no recognition of the need to become more effective and efficient in providing support services. Improving effectiveness and efficiency implies assuming and managing additional risk. Managing risk becomes a hard sell in an environment that routinely rewards minimizing risk taking. The private sector has developed many tools and techniques to apply to these types of problems. In many respects, the current record sustaining economic growth period can be credited to improvements in business effectiveness and efficiency.

Recommendation 3: Installation managers must be recognized and rewarded for demonstrating the desired behavior. The existing reward system based on functional area or project growth in scope and resources must be revised. Recognition and reward should be received by managers that demonstrate business acumen and achieve support goals while reducing the amount of resources consumed and improving the services provided. The Marine Corps should adopt some of the successful private sector business practices for recognition and reward.

Conclusion 4: The existing financial management system for accounting and budgeting does not support the needs of installation managers. The system is cumbersome, labor intensive, and severely restricted in capability, as it is antiquated and

obsolete. Unfortunately, the existing system is the primary means of financial management across the Marine Corps and is used for all critical resource applications. For these reasons, there is formidable resistance to change. The data indicates that the financial management system does not support business reform.

The Marine Corps has chosen to implement Activity Based Costing and Management (ABC/M) to augment their existing financial accounting system in order to support business reform. The change in accounting procedures is expected to occur simultaneously with other business reform changes. The Marine Corps has articulated a plan for implementing ABC/M at the installation level. However, clear direction has not been established on how the Marine Corps will use ABC/M outside of the installations.

Recommendation 4: If ABC/M methodology is to be effective, it will be necessary to revise the primary financial management system as well. The Marine Corps should adapt a new and updated financial management system that supports the ABC/M goals. The system should be oriented toward business management practices and should be a Marine Corps wide initiative.

Conclusion 5: The Marine Corps has expressed a desire to award any A-76 contracts for installation support through the Marine Corps internal contracting office. The Naval Facilities Engineering Command (NAVFAC) is the only DoN warranted contracting office with authority to contract for facility construction services, real property maintenance (RPM) services, maintenance and repair services under the Davis-Bacon Act, architect and engineering (A/E) services, utility services and commodities, and real property contracts. These contracts are the majority of contracting requirements

on a typical Marine Corps installation. Any large installation service contract from an A-76 study in the facility maintenance functional area would certainly exceed the existing authority of a Marine Corps contracting office. In addition, the service contracting experience level of the Marine Corps contracting offices is substantially less than the experience level of the corresponding NAVFAC office.

Recommendation 5: Marine Corps installations generally have two warranted contracting entities for the acquisition of goods and services. An internal Marine Corps contracting office procures the goods and services consumed by the base while a Naval Facilities Engineering Command (NAVFAC) contracting office is responsible RPM and construction requirements. The Marine Corps should take advantage of the NAVFAC experience and develop a partnership agreement to allow shared contracting responsibility. A proposed solution would be to have NAVFAC serve as the Procurement Contracting Office (PCO) and the Marine Corps office to serve as the Administrative Contracting Office (ACO).

3. Culture

Conclusion 1: The data indicates that Marine Corps installation managers do not support consolidation with installations from other services or with the local community. The existing culture of Marine Corps installations is to segregate and isolate themselves from outside influences and maintain their self-sufficiency. The affects of this cultural aspect hinder efforts to regionalize installation services among all DoD installations within a geographical local and the efforts to solicit services from the local communities.

Recommendation 1: The Marine Corps leadership cannot directly change organizational culture. Culture is a reflection of the "what is" state and as such is an emergent property. However, the leadership can influence culture by establishing clear direction that is congruent with desired results, structure and rewards. The Marine Corps should articulate unambiguous direction on the expectations for regionalization and for acquiring services from the local communities.

Conclusion 2: The Marine Corps policy states that family housing should be privatized where it makes sense. This ambiguous policy creates a severe impediment to the effort to privatize family housing if indeed the intent is to pursue privatization. The data indicates a belief by installation managers that installations should provide family housing and that Marines have unique requirements. In addition, it appears that privatizing family housing is given little consideration in Marine Corps business reform management.

Recommendation 2: Based on the most recent requests to increase the Basic Allowance for Housing (BAH) amounts, the DoD policy appears to consistently rely on the private sector to provide the majority of family housing. The Marine Corps appears to be out of alignment with the DoD position. The Marine Corps policy on privatizing family housing should be clarified and installations provided definitive direction on how to proceed.

4. Outputs

Conclusion 1: The data indicate that the Marine Corps has not established a standard measurement process for evaluating how well services are provided. The expectations of installations are high that services meet the requirements of service receivers. The default standard is typically reaction to feedback from service receivers. The feedback mechanisms also substitute for performance indicators.

Recommendation 1: The Marine Corps should establish a standard output measurement process. Typical measures of success for installations may include providing support services for the quality of life (QOL) of Marines and their families, providing training support for operational units, and providing mission readiness support for operational units stationed on the installation. Additionally, installations provide support for military retirees and to the community at large as outputs. These outputs may warrant consideration for standard measurement as well.

Conclusion 2: The data indicate that the Marine Corps has not established a standard performance indicating process for monitoring how well services are provided. Performance indicators can be determined in terms of three factors. First, how well the organization meets strategic objectives. Second, how well the organization uses scarce resources. Third, how successful the organization is at positioning itself to seize the opportunities and stave off the threats presented by the environment.

Recommendation 2: The Marine Corps should establish a standard performance indicating process. Performance indicators that mark achievement of strategic goals and

objectives would enhance the ability and success of installation managers. Achieving improvement in the efficiency and effectiveness of service delivery depends on the ability to measure performance in terms of minimizing the consumption of resources required to meet service support objectives. Installations are not able to recognize or address threats and opportunities presented by the external environment without a meaningful performance indicator process.

5. Outcomes

Conclusion 1: The survey data identified that installation managers espoused an opinion that one of the most important outcomes of business reform was returning Marines to the FMF. The source of this initiative as a desirable outcome apparently comes from the CMC Commandant's Guidance. (Jones, 1999). It is clear that one of the most important outcomes of business reform is reducing the number of Marines assigned to installation billets, and consequently the amount of money spent on those billets. The DoD mandates indicate that savings from reducing installation support structure are to be reinvested in equipment modernization initiatives, and in fact, the savings are already programmed for that expense. By redirecting the savings generated from reducing the number of Marines assigned to installation billets to effectively increase the end strength of the FMF, creates an additional cost as an unintended consequence of business reform. This is not to say that increasing the end strength of the FMF is not necessary, or that it should not be pursued, only that the policy is incongruent with the intended outcome of cutting overall costs to pay for modernization. There is another serious unintended

consequence created by pursuing this policy. By effectively reassigning the Marines from one job to another, any savings realized by billet reductions from business process reform initiatives must effectively come at the expense of reducing the civilian population. The installations have a dollar savings target that they must achieve. Another unintended consequence is that installation managers are less likely to identify Marine billets to be eliminated if they receive no credit against their savings mark for Marine billets eliminated.

Recommendation 1: The Marine Corps should follow a consistent direction and revise their policy on returning installation Marine billets eliminated by business reform to the FMF. If additional end strength is necessary in the FMF, the policy should be addressed outside of the business reform initiative. A separate initiative should be created to field or realign the additional end strength that includes new or reprogrammed funding to pay for the increase. The Marine Corps should provide incentive to the installations for identifying all possible Marine billet reductions. The Marine Corps should also identify what installation Marine billets should be maintained to support training, shore rotation and other requirements.

Conclusion 2: The DoD business reform mandates identify outsourcing installation services that are not core competencies as necessary to improve the effectiveness and efficiency of installation services. The installation managers expressed the opinion that outsourcing is not one of the most important outcomes of business reform initiatives. The installations also identified that business reform expectations have

not been clearly stated. The installation organizational system outcomes are therefore incongruent with system direction setting.

Recommendation 2: The comprehensive strategy that the Marine Corps business plan refers to should provide business reform expectations and clear direction on the desirable outcome regarding outsourcing. Specifically, the strategy needs to clearly identify those functions considered core competencies, those functions that should be competitively sourced, as well as those functions that should be outsourced directly.

C. RESTATEMENT OF RESEARCH QUESTIONS

Primary Research Question:

The primary research question is stated as: *"How are Department of Defense business process reforms changing the way Marine Corps installations are managed and operated?"*

Secondary Research Questions:

In addition to the primary question, additional secondary research questions will require investigation. Secondary research questions include:

- What elements of the Department of Defense major reform initiative affect operation of Marine Corps installations?
- What impact does the Department of Defense major reform initiative have on the operation of Marine Corps installations?

- What is the current state "*organizational systems model*" for a typical Marine Corps base organization?
- What Base operations changes have been initiated by the Marine Corps because of the Department of Defense major reform initiative?
- What external environment factors are contributing to the changes in business processes?
- What installation business practice mandates to the Marine Corps have changed?
- What Marine Corps installation organizational system elements must change to support Department of Defense major reform initiatives?
- What lessons learned from other public and private organizations can be applied to the Marine Corps?
- What are the essential skills required by Marine Corps installation leaders to ensure successful implementation of the mandated changes?

The research questions served as the basis for inquire of this study. Each of the questions was addressed by this study to the extent permitted by the time available and subject to limitation of scope.

D. LIMITATIONS

1. Scope Limitations

The scope of this thesis was intended to be broad in terms of the business reform initiatives that were reviewed. Each of the areas identified could become the focus of a more narrow independent study. The intent of this thesis was to apply an elevated view approach to business reform impacts on Marine Corps installations.

The scope of this study was limited to major business reform initiatives that have been initiated by DoD. It was necessary to exclude other less significant initiatives of both DoD and the Marine Corps.

2. Institutional Obstacles

The study identified substantial institutional resistance to change within the Marine Corps and the installations. Business process reform is a major undertaking of a change initiative with scope that far exceeds routine change processes that are more familiar. The expanded scope of the business reform initiatives requires the senior leadership of the Marine Corps to provide more focused direction setting than usual.

3. Technical Obstacles

There were several technical obstacles to business reform identified during the course of this study. Some of the obstacles identified by the early DSB study remains. The most substantial obstacle appears to be the inability to initiate direct outsourcing

actions and the timeline of the A-76 process. Reliance on the A-76 process appears to be compounded by the decision of DoD to use positions competed as a performance indicator for the requirements of the Government Performance and Results Act (GPRA). Some additional statutory restrictions have not been adequately addressed. Examples include the laws regarding real property transfer and the prohibition on contracting guard and fire protection services. Additional legislative action would enhance the business reform initiatives.

E. SUGGESTED FURTHER STUDIES

This exploratory study has only begun to uncover the growing body of knowledge on installation management business reforms. There are several areas that would provide an opportunity for more detailed research. Some of those potential research projects include:

- A more detailed analysis of Marine Corps installation organization system areas of design factors only.
- A more detailed analysis of the specific external environmental factors and their effects on Marine Corps installation business reform.
- A detailed analysis of business reform lessons learned from other service business reform initiatives and how they would apply to Marine Corps installations.
- An analysis of city government business reform initiatives and how the lessons learned could be applied to Marine Corps installations.

APPENDIX A. SURVEY INSTRUMENT

A. SURVEY QUESTIONS

Survey questions categorized by the five organizational system areas of system direction, design factors, culture, outputs and outcomes were provided to 66 civilian and military managers at three Marine Corps Installations. Responses were received from 35 managers in the time period requested. Each responder was asked to select the most appropriate response based on the following five level Likert scale.

1--Strongly disagree

2--Disagree

3--No strong feelings

4--Agree

5--Strongly agree

The survey questions were evaluated using a Chi-square (χ^2) test for statistical significance. The purpose of the χ^2 test is to determine if the responses to each question were random or whether something unrelated to chance is occurring. The χ^2 test used for data analysis was the Goodness of fit test and the formula is presented in figure A-1. When the calculated value of χ^2 is equal to or greater than 3.84, the probability that the

responses did not occur randomly is at least 95 percent. Or stated another way, the probability that the responses were random is 5 percent or less.

$\chi^2 = \frac{(M-m-1)^2}{M+m}$	M = Majority m = Minority	$\chi^2 \geq 3.84, p \leq .05$ $\chi^2 \geq 6.69, p \leq .01$ p = probability of error
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Figure A-1 Goodness of Fit Test

The survey questions are listed below followed by the raw survey data presented in Table A-1. The data analysis is presented in Table A-2.

SYSTEM DIRECTION:

1. Competitive sourcing base services by the A-76 process is changing base operations.
2. Consolidation or regionalizing base support functions is changing base operations.
3. Privatizing functions such as family housing and utilities is changing base operations.
4. Business Process Reengineering such as activity based costing (ABC) and direct vendor delivery is changing base operations.
5. The Marine Corps has articulated a clear vision that describes what bases will look like in the future.

DESIGN FACTORS:

1. Base services provided by Marines are effective.
2. Base services provided by Civil Servants are effective.
3. Base services provided by Contractors are effective.
4. Marines are efficient at providing base services.
5. Civil Servants are efficient at providing base services.
6. Contractors are efficient at providing base services.
7. Base personnel possess the knowledge, skills and abilities (KSA's) to successfully implement business reform.
8. Base personnel possess the KSA's necessary to operate like a private sector business.
9. The base financial management system effectively supports business operations.
10. Base personnel possess the KSA's to successfully execute major service contracts.
11. The existing base organization structure will support business reform.
12. The base is prepared to integrate contractors into the workforce.
13. Base personnel are rewarded for supporting business reform.
14. A base staff job is detrimental to a Marine Officer's career.
15. The Marine Corps adequately prepares Officers for base duty assignments.

CULTURE:

1. Marines are comfortable interacting with other Marines for base services.
2. Marines are comfortable interacting with Civil Service employees for base services.
3. Marines are comfortable interacting with Contractors for base services.
4. Civil Service employees have the same values as Marines.
5. Contract employees have the same values as Marines.
6. The Installation Commander should be in control or command of service providers.
7. Marine Corps bases should be integrated with the local community.
8. Marine Corps bases should be consolidated regionally.
9. Marine Corps bases should be consolidated with Navy bases.
10. Marine Corps bases should be consolidated with bases of all services.
11. Marine Corps bases should be integrated with the local community.
12. Family housing should be provided by Marine Corps bases.
13. Marines and their families have unique support requirements when compared with the public sector.

OUTPUTS:

1. Providing a place for the **FMF to train** in support of improving their readiness is one of the most important outputs.
2. Providing a place for the **FMF to work** and maintain their equipment readiness is one of the most important outputs.
3. Providing a place for **Marines and Family Members to live** is one of the most important outputs.
4. Providing **support services for Marines** is one of the most important outputs.
5. Providing **support services for Marines and Family members** is one of the most important outputs.
6. Providing support services for **military retirees** is one of the most important outputs.
7. Providing support services for **the community** is one of the most important outputs.
8. A standard **measurement process** is used for measuring the services provided.
9. **Performance indicators** that identify how well services are provided are in use.

OUTCOMES:

1. The **quality** of delivered services to stakeholders is one of the most important outcomes.
2. The **effectiveness** of delivered services to stakeholders is one of the most important outcomes.
3. The **cost** of delivered services to stakeholders is one of the most important outcomes.
4. The **efficiency** of delivered services to stakeholders is one of the most important outcomes.
5. **Returning Marines** to the FMF by reducing the number assigned to base operations is one of the most important outcomes.
6. **Outsourcing** base services is one of the most important outcomes.
7. The **expectations** of business reform have been adequately articulated by the Marine Corps.
8. I have a clear **understanding** of my role in executing Marine Corps business reform.

AREA		Survey Number																																		
	Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
SYSTEM DIRECTION	1	5	2	5	3	4	2	5	5	5	4	5	4	4	5	2	5	5	4	3	5	4	5	5	4	5	4	4	5	4	4	4	4	5	4	4
	2	5	4	5	4	4	2	4	5	4	5	5	5	5	5	2	5	5	4	5	5	4	5	5	4	5	4	4	4	4	4	4	4	2	4	4
	3	4	4	4	1	4	2	4	5	3	4	5	4	5	4	3	5	5	5	5	5	4	5	5	3	5	5	4	3	4	3	4	2	4	4	4
	4	2	2	4	4	4	3	4	4	5	4	4	4	4	4	2	5	5	2	4	5	3	4	5	4	4	5	3	3	5	4	3	4	2	5	4
	5	1	1	2	5	2	2	2	2	1	2	2	2	2	2	1	3	3	2	3	1	2	3	2	2	3	3	2	2	1	2	2	2	1	2	1
DESIGN FACTORS	1	2	3	4	4	4	4	4	4	4	4	3	3	3	3	3	5	4	2	3	4	4	4	4	4	3	2	3	2	4	4	3	4	4	4	2
	2	4	3	4	5	4	4	4	4	4	4	3	4	3	4	3	5	4	3	3	5	4	4	2	4	4	3	4	4	5	5	4	4	4	4	
	3	3	3	3	3	4	4	3	3	3	4	4	3	3	2	3	4	4	3	3	3	4	4	3	4	4	4	4	4	2	2	3	4	4	3	
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	5	4	3	4	4	4	4	4	4	3	2	4	3	3	3	3	5	4	3	4	5	3	4	3	4	4	3	2	4	5	5	4	4	4	3	
	6	3	3	3	5	4	4	2	4	1	4	4	3	3	1	3	4	4	3	4	3	3	4	3	4	4	4	4	4	1	2	3	4	4	4	3
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	9	1	1	4	3	2	2	2	1	4	1	1	2	2	1	1	2	2	1	2	4	4	3	3	4	1	2	2	2	1	2	2	2	3	1	
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CULTURE	1	4	4	4	5	4	5	4	4	5	4	4	4	4	5	3	5	5	4	4	5	5	4	5	4	4	5	4	3	3	5	4	5	5	5	3
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	8	4	2	2	2	2	1	2	5	2	5	4	2	2	2	2	4	1	4	5	2	2	3	4	3	4	5	4	4	4	1	2	5	4	4	4
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OUTPUTS	1	5	5	5	4	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	4	5	5	4	5	5	5	5	4	5	5	5	5	
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	9	2	1	3	3	5	3	2	1	2	4	4	2	2	3	1	5	3	3	3	2	3	4	3	3	1	3	2	2	4	2	2	4	2	2	1
OUTCOMES	1	4	5	5	3	5	4	4	4	4	5	4	5	4	4	4	5	4	4	4	4	5	5	4	5	5	4	5	5	4	5	4	5	4	4	4
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	7	2	1	2	2	3	4	2	2	1	2	2	3	2	2	3	3	3	4	2	1	2	3	2	3	2	3	2	2	5	2	1	4	2	4	1
	8	2	1	4	4	4	4	2	4	1	4	4	4	4</																						

TABLE A-1: SURVEY DATA

AREA	Question Number	MEAN AVE	STDDEV	Roundd	MIN	MAX	MODE	Disagree	Agree	No Opinion	AGREE OR DISAGREE	CHI Square	p ≤ .05 Yes/No
SYSTEM DIRECTION	1	4.20	0.90	4	2	5	5	3	30	2	Agree	25.04	Yes
	2	4.26	0.85	4	2	5	4	3	32	0	Agree	27.03	Yes
	3	4.00	1.00	4	1	5	4	3	27	5	Agree	22.04	Yes
	4	3.80	0.96	4	2	5	4	5	25	5	Agree	18.05	Yes
	5	2.03	0.82	2	1	5	2	28	1	6	Disagree	25.04	Yes
DESIGN FACTORS	1	3.46	0.78	3	2	5	4	5	20	10	Agree	13.07	Yes
	2	3.89	0.68	4	2	5	4	1	27	7	Agree	24.04	Yes
	3	3.37	0.65	3	2	4	3	3	16	16	Agree	11.08	Yes
	4	3.09	1.09	3	1	5	4	12	17	6	Agree	3.20	No
	5	3.71	0.75	4	2	5	4	2	23	10	Agree	19.05	Yes
	6	3.31	0.96	3	1	5	4	5	18	12	Agree	11.08	Yes
	7	2.74	1.04	3	1	5	2	17	10	8	Disagree	5.14	Yes
	8	2.63	1.00	3	1	5	2	20	7	8	Disagree	11.08	Yes
	9	2.09	1.01	2	1	4	2	26	5	4	Disagree	19.05	Yes
	10	3.11	1.05	3	1	5	4	10	16	9	Agree	4.17	Yes
	11	2.69	1.05	3	1	5	2	20	9	6	Disagree	9.09	Yes
	12	2.57	0.92	3	1	5	3	16	4	15	Disagree	10.08	Yes
	13	2.37	0.84	2	1	4	2	24	5	6	Disagree	17.05	Yes
	14	2.94	0.94	3	1	4	3	10	11	14	Agree	0.00	No
	15	2.40	0.77	2	1	4	2	21	3	11	Disagree	16.06	Yes
CULTURE	1	4.29	0.67	4	3	5	4	0	31	4	Agree	29.03	Yes
	2	3.37	0.97	3	1	5	4	7	18	10	Agree	9.09	Yes
	3	2.85	0.81	3	1	4	3	12	8	15	Disagree	2.25	No
	4	3.05	1.03	3	2	5	2	14	13	8	Disagree	0.00	No
	5	2.20	0.90	2	1	5	2	22	1	12	Disagree	19.05	Yes
	6	4.05	1.06	4	1	5	5	4	28	3	Agree	22.04	Yes
	7	2.83	1.01	3	1	5	2	15	9	11	Disagree	4.17	Yes
	8	3.09	1.29	3	1	5	2	16	17	2	Agree	0.00	No
	9	2.20	1.13	2	1	5	2	24	6	5	Disagree	16.06	Yes
	10	2.05	1.16	2	1	5	1	24	5	6	Disagree	17.05	Yes
	11	2.69	1.02	3	1	5	2	16	8	11	Disagree	6.13	Yes
	12	3.26	1.04	3	1	5	4	9	15	11	Agree	4.17	Yes
	13	3.77	1.19	4	1	5	4	8	25	2	Agree	15.06	Yes
OUTPUTS	1	4.86	0.36	5	4	5	5	0	35	0	Agree	33.03	Yes
	2	4.65	0.59	5	3	5	5	0	33	2	Agree	31.03	Yes
	3	3.83	1.07	4	1	5	4	5	25	5	Agree	18.05	Yes
	4	4.20	0.63	4	3	5	4	0	31	4	Agree	29.03	Yes
	5	4.09	0.70	4	3	5	4	0	28	7	Agree	26.04	Yes
	6	3.23	0.94	3	2	5	4	10	16	9	Agree	4.17	Yes
	7	2.03	0.86	2	1	4	2	28	3	4	Disagree	23.04	Yes
	8	2.26	0.85	2	1	4	2	25	4	6	Disagree	19.05	Yes
	9	2.63	1.09	3	1	5	2	17	7	11	Disagree	8.10	Yes
OUTCOMES	1	4.40	0.55	4	3	5	4	0	34	1	Agree	32.03	Yes
	2	4.46	0.55	4	3	5	4	0	34	1	Agree	32.03	Yes
	3	3.97	0.86	4	2	5	4	3	28	4	Agree	23.04	Yes
	4	4.26	0.66	4	3	5	4	0	31	4	Agree	29.03	Yes
	5	3.89	0.90	4	2	5	4	3	25	7	Agree	20.05	Yes
	6	2.31	1.02	2	1	4	2	20	5	10	Disagree	13.07	Yes
	7	2.40	0.98	2	1	5	2	22	5	8	Disagree	15.06	Yes
	8	3.51	1.17	4	1	5	4	9	23	3	Agree	12.07	Yes

TABLE A-2: SURVEY DATA ANALYSIS

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